PB-217 959

WATER POLLUTION CONTROL. WASTE TREATMENT AND WATER TREATMENT. SELECTED BIOLOGICAL REFERENCES ON FRESH AND MARINE WATERS

R. Keith Stewart, et al

Robert A. Taft Sanitary Engineering Center
Cincinnati, Ohio

1966

DISTRIBUTED BY:

NTIS
National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

PB 217 959

WATER POLLUTION CONTROL

WASTE TREATMENT and WATER TREATMENT

Selected Biological References on Fresh and Marine Waters

R. Keith Stewart
William Marcus Ingram and
Kenneth M. Mackenthun
Biologists, Technical Advisory
and Investigation Activities
Technical Services Program
Robert A. Taft Sanitary Engineering Center

Details of illustrations in this
document may be better studied
on microfiche.

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
U S Department of Commerce
Springfield VA 22151

UNITED STATES
DEPARTMENT OF THE INTERIOR
Federal Water Pollution
Control Administration
1966

I

130

FOREWORD

OUR POPULATION has expanded rapidly during the past five decades and will continue to do so for an indeterminable time during future decades. Associated with this expansion has been an increase in the amount and concentration of wastes, both domestic and industrial, that are injected into waterways as an inevitable product of our affluent society. It has become apparent that the same waterways receiving these wastes must be used to provide water for potable, agricultural, industrial, and recreational purposes. Unlike clean waters that serve mankind in many ways, grossly polluted water cannot be used for multiple purposes. Clean waters are precious assets, defiled waters are needless liabilities.

This book of selected references dealing with water quality and use has been prepared for persons interested in and responsible for biological aspects of water pollution control, waste treatment, and water treatment.

Preceding page blank

The report contains references on the following topics concerning water pollution: Biology

CONTENTS

Page
Preface ix
Acknowledgments 126

PART I — WATER POLLUTION CONTROL ASPECTS: FRESH WATERS 1

Water Pollution Control

General References 1
Algae and Plankton 4
Toxic Algae 8
Fungi 9
Bottom Organisms 10
Insects 12
Fish 12
Flowering Aquatic Plants 14
Nutrients 15
Insecticides and Their Effect Upon Aquatic Life 19
Environment Change and Its Effect Upon Aquatic Life 22
Radioactivity and Its Effect Upon Aquatic Life 24
Toxicity and Bio-Assay Methods 25
Techniques 30
Samplers 32
Criteria for Aquatic Life 33

Industrial Wastes

General References 34
Cooling Water 35
Food, Drugs, and Fermentation 36
Metals and Manufacturing 36
Petroleum 38
Pulp, Paper, and Textiles 39

Organism Identification

General References 41
Insects 41
Fish 43
Algae and Flowering Aquatic Plants 43
Other Organisms 43

to p. VII

Preceding page blank

Page

Aspects of Water Quality

Books 44
Journals 46

PART II — WATER POLLUTION CONTROL ASPECTS: MARINE WATERS 51

Water Pollution Control

General References 51
Bacteria 54
Algae and Plankton 56
Toxic Algae 57
Fungi 59
Bottom Organisms 59
Fish and Shellfish 61
Flowering Aquatic Plants 62
Nutrients 62
Recreational Waters 65
Pesticides and Their Effect Upon Aquatic Life 66
Environment Change and Its Effect Upon Aquatic Life 67
Radioactivity and Its Effect Upon Aquatic Life 69
Toxicity and Bio-Assay Methods 72
Techniques 74
Samplers 76
Criteria for Aquatic Life 77

Industrial Wastes

General References 77
Cooling Water 78
Metals and Manufacturing 78
Petroleum 78
Pulp, Paper, and Textiles 79

Organism Identification

General References 81
Protozoa, Porifera, Coelenterates, Echinoderms, and Annelids 81
Molluscs 82
Arthropods 82
Fishes 83
Algae and Flowering Aquatic Plants 84
Other Organisms 85

Aspects of Water Quality

Books 85
Journals 87

from p. V

Page

PART III — WASTE TREATMENT AND WATER TREATMENT ASPECTS 91

Waste Treatment

- General References 92
- Imhoff Tanks 93
- Filters 94
- Activated Sludge 96
- Waste Stabilization Ponds 97
- Sewer Pipes 100
- Parasites and Sewage Treatment 100
- Nuisance Organisms and Their Control 101

Water Treatment

- General References 103
- Control of Aquatic Organisms 106
- Taste and Odor Algae 108
- Biological Aspects of Impounding Reservoirs 109
- Clogging Organisms 111
- Clear Well Organisms 112
- Pipe and Distribution System Associated Organisms 112
- Chlorine and Its Effect Upon Organisms 113
- Actinomycetes 114

Recreational Water Treatment

- General References 114
- Algal Control 115
- Flowering Aquatic Plant Control 116
- Insect Control 118
- Swimmer's Itch Control 119
- Pesticides and Their Effect Upon Aquatic Life 120

PART IV — REPORTING ASPECTS FOR BIOLOGICAL DATA 125

Reporting Biological Data 125

PLATES

I. Water Pollution Control Aspects: Fresh Waters XI

II. Water Pollution Control Aspects: Marine Waters 49

III. Waste Treatment and Water Treatment Aspects 89

IV. Reporting Biological Data 123

PREFACE

THIS BOOK of selected biological references concerning Water Pollution Control, Waste Treatment, and Water Treatment is a direct outgrowth of previous compilations conceived in 1950 by the second author, Dr. W. M. Ingram, when he served as the first full time biologist assigned to training activities at the Environmental Health Center of the United States Public Health Service in Cincinnati, Ohio. Since that time he has initiated several publications containing selected references on various aspects of water pollution biology. Now out of print the previous publications were:

(1) Handbook of Selected Biological References on Water Pollution Control, Sewage Treatment, and Water Treatment. Public Health Bibliography Series No. 8 (PHS Publication No. 214), pp. 1–66, 1953.

(2) Opt. Cite. Public Health Bibliography Series No. 8 (PHS Publication No. 214—Revised 1957), pp. 1–95, 1957.

(3) Estuarine and Marine Pollution, Selected Studies on Biological, Bacteriological, and Physical Aspects with Major Emphasis on United States Literature. Public Health Service Technical Report W–61–4, pp. 1–30, 1961.

(4) Water Pollution Control, Sewage Treatment, Water Treatment, Selected Biological References. Public Health Bibliography Series No. 8 (PHS Publication No. 1053), pp. 1–142, 1963.

Most references in the previous publications have been retained in this book, and selected references subsequent to 1962 through 1965 have been added. The revision and additions herein, and the expansion to include the marine aspects with those of fresh water, should be helpful in providing source material under one cover for those engaged in the study of pollution as related to aquatic life.

Preceding page blank

In many regions of the United States, history has illustrated that land was defiled by over-timbering, over-grazing, and the unwise use of the plow. For many years, one could move away from such destroyed, "polluted land," and still subsist; when this was not possible, people became land conservationists, realizing that in the land lay survival. The history of land depredation could, in the future, be repeated in the defilement of our waters. The number of streams and natural lakes is static with a minimal number of future impoundment sites; there is no moving over a ridge to discover a new waterway. All waters must be protected for a variety of uses including the maintenance of a healthy biota. All of us should be water conservationists, realizing that water is limited and that in its wise use lies a great part of this Nation's strength

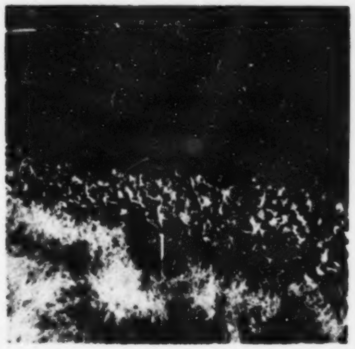
Today all water users are becoming more and more interested in the alleviation of pollution. Full realization of population and industrial growth has brought many persons into intimate contact with problems relating to water degradation associated with municipal, industrial, or agricultural wastes, or a combination of these. Most people fully appreciate that streams, lakes, and marine waters remain static in number; it is apparent that problems attendant to waste disposal and water treatment are increasing. Thus, the problems of waste disposal and their reasonable solution are the concern of all.

Multiple use of water is the current trend. If pollution is abated, water can be satisfactorily used for many and varied interests.

With the abatement of pollution, danger from disease is lessened; a better potable water is produced; new industries can be attracted to communities; property values increase; recreation in the form of fishing, hunting, boating, and swimming is more readily available; and current supplies of fishery and shellfishery food products can be sustained. To assure an adequate quality of water for all these purposes, water must be used and managed wisely.

Waste outfall

Aquatic weeds associated with induced eutrophication.



Slime growths effected by wastes.

Plate I—Water Pollution Control Aspects: Fresh Waters

PART I

WATER POLLUTION CONTROL ASPECTS: FRESH WATERS

UNLIKE SALINE WATERS, clean fresh-waters are economical sources of water that can be and have been tapped to sustain the domestic, agricultural, industrial, and recreational needs of the nation. Our population has increased from 76,000,000 people in 1900 to 150,000,000 in 1950 and to 180,000,000 in 1960. By 1980 it is expected to increase to 260,000,000. Yet, there has been no change in the amount of available water, and no major additions are anticipated. Ready and economical supplies of clean water are no longer adequate for many burgeoning cities, and most are now faced with finding new and expensive water sources just to keep pace with only the domestic demands. Some cities are transected by large rivers, but many are sufficiently fouled with domestic and industrial wastes that their waters cannot be used for any purpose. Such situations can become very widespread throughout the land, and can seriously affect the general welfare of the nation. It is axiomatic then that with an increasing population and a "fixed" amount of fresh water the control and abatement of pollution is one of the most important means of solving water supply problems.

Along with making water unfit for many uses pollution of water courses has several biological effects. It can foster undesirable plant and animal growths, generate putrid water and odors, eliminate desirable aquatic and other wildlife that provide both food and recreation, taint water supplies and fish flesh, discolor water and make it unsightly, change habitats to favor growth of toxic organisms that decimate livestock and pets as well as cause sickness in man, nurture growths that impede flows in watercourses, create conditions suitable for development of human and animal pests, make recreational waters unusable, and enhance the spread of disease to epidemic levels.

WATER POLLUTION CONTROL

GENERAL REFERENCES

ALLEN, M. B.
1955. General Features of Algae Growth in Sewage Oxidation Ponds. State Water Pollution Control Board, Sacramento, California, Publication No. 13, pp. 1–47.

BARTSCH, A. F.
1948. Biological Aspects of Stream Pollution. Sewage Works Journal, vol. 20, No. 2, pp. 292-302.

BARTSCH, A. F. and W. S. CHURCHILL
1949. Biotic Responses to Stream Pollution During Artificial Stream Reaeration. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 33–48.

BARTSCH, A. F. and W. M. INGRAM
1959. Stream Life and the Pollution Environment. Public Works, vol. 90, No. 7, pp. 104–110.

BEAK, T. W.
1959. Biological Survey of the St. Clair River. Industrial Wastes, vol. 4, No. 5, pp. 107–109.

BEGLANE, K. E. and R. A. LAFLEUR
1954. Biological Indices of Pollution Observed in Louisiana Streams. Bulletin of the Louisiana Engineering Experiment Station, vol. 43, pp. 1–7.

BRINLEY, F. J.
1942. Biological Studies, Ohio River Pollution, I. Biological Zones in a Polluted Stream. Sewage Works Journal, vol. 14, No. 1, pp. 147–152.

BRINLEY, F. J.
1942. Relation of Domestic Sewage to Stream Productivity. Ohio Journal of Science, vol. 42, No. 4, pp. 173–176.

BRINLEY, F. J.
1943. Sewage, Algae and Fish. Sewage Works Journal, vol. 15, No. 1, pp. 78–83.

CALAWAY, W. T. and J. B. LACKEY
1962. Waste Treatment Protozoa, Flagellata. University of Florida, College of Engineering, Florida Engineering Series No. 3, pp. 1–140.

CAMPBELL, M. S. A.
1939. Biological Indicators of Intensity of Stream Pollution. Sewage Works Journal, vol. 11, No. 1, pp. 123–127.

CAWLEY, W. A.
1958. An Effect of Biological Imbalance in Streams. Sewage and Industrial Wastes, vol. 30, No. 9, pp. 1174–1182.

CLAASSEN, P. W.
1932. The Biology of Stream Pollution. Sewage Works Journal, vol. 4, No. 1, pp. 165–172.

CORMACK, J. F. and H. R. AMBERG
1959. The Effect of Biological Treatment of Sulfite Waste Liquor on the Growth of *Sphaerotilus natans*. Proceedings of the Fourteenth Industrial Waste Conference, Purdue University, vol. 44, No. 5, pp. 16–25.

DIMICK, R. E.
1953. The Aquatic Biology of Industrial Pollution. Wastes Engineering, vol. 24, No. 3, pp. 66–67, 87–88.

DYMOND, J. R. and A. V. DELAPORTE
1952. Pollution of the Spanish River. Ontario Department of Lands and Forests, Research Report No. 25, pp. 1–106.

ELIASSEN, R.
1952. Stream Pollution. Scientific American, vol. 18, No. 3, pp. 17–21.

GAUFIN, A. R. and C. M. TARZWELL
1955. Environmental Changes in a Polluted Stream. American Midland Naturalist, vol. 54, No. 1, pp. 77–88.

GECKLER, J. R., K. M. MACKENTHUN and W. M. INGRAM
1963. Glossary of Commonly Used Biological and Related Terms in Water and Waste Water Control. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–2, pp. 1–22.

GILCREAS, F. W.
1952–1953. Laboratory Control of Sewage Treatment, Chapter 12, Stream Analyses, pp. 79–87. Case-Shepperd-Mann Publishing Company, New York, 92 pp.

HARRISON, M. E. and H. HEUKELEKIAN
1958. Slime Infestation—Literature Review. Sewage and Industrial Wastes, vol. 30, No. 10, pp. 1278–1302.

HEUKELEKIAN, H. and E. S. CROSBY
1955. Slime Formation in Polluted Waters. I. Laboratory and Field Study Methods. Sewage and Industrial Wastes, vol. 27, No. 12, pp. 1391–1398.

HEUKELEKIAN, H. and E. S. CROSBY
1956. Slime Formation in Polluted Waters. II. Factors Affecting Slime Growths. Sewage and Industrial Wastes, vol. 28, No. 1, pp. 78–92.

IDE, F. P.
1954. Pollution in Relation to Stream Life. Papers Presented at the First Ontario Industrial Waste Conference, Ontario Agricultural College, Guelph, Ontario, pp. 86–108.

INGRAM, W. M. and K. M. MACKENTHUN
1965. Pollution. In: McClane's Standard Fishing Encyclopedia and International Angling Guide. Holt, Rinehart and Winslow, New York, pp. 687–693.

JONES, J. R. E.
1940. A Study of the Zinc-Polluted

River Ystwyth, in North Cardiganshire, Wales. Annals of Applied Biology, vol. 27, pp. 368–378.

Lackey, J. B.
1954. How the Biota of Sewage and Industrial Wastes Work for Us. Wastes Engineering, vol. 25, No. 12, pp. 592–595.

Lackey, J. B., W. T. Calaway and G. B. Morgan
1956. Biological Purification of Citrus Wastes. Sewage and Industrial Wastes, vol. 28, No. 4, pp. 538–546.

Lawrance, W. A.
1950. The Addition of Sodium Nitrate to the Androscoggin River. Sewage and Industrial Wastes, vol. 22, No. 6, pp. 820–832.

Mackenthun, K. M. and W. M. Ingram
1965. Pollution and the Life in Water. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–20, pp. 1–16.

McCoy, J. H.
1963. Salmonellae in Crude Sewage, Sewage Effluent and Sewage-Polluted Natural Waters. International Journal of Air and Water Pollution, vol. 7, Nos. 6–7, pp. 597–611.

McKee, J. E. and H. W. Wolf
1963. Water Quality Criteria. 2nd Edition. The Resources Agency of California. State Water Quality Board, Publication No. 3–A, 1–548. pp.

McLean, J. E. (ed.)
1963. Symposium on Streamflow Regulation for Quality Control; Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–30, pp. 1–420.

Neel, J. K.
1953. Certain Limnological Features of a Polluted Irrigation Stream. Transactions of the American Microscopical Society, vol. 72, No. 2, pp. 119–135.

Newton, L.
1944. Pollution of the Rivers of West Wales by Lead and Zinc Mine Effluent. Annals of Applied Biology, vol. 31, No. 1, pp. 1–11.

Odum, E. P.
1954. Fundamentals of Ecology: Chapter 12; No. 7, Stream Pollution, pp. 330–334. W. B. Saunders Company, Philadelphia, Pennsylvania, pp. 1–384.

Palmer, C. M. and W. M. Ingram
1955. Suggested Classification of Algae and Protozoa in Sanitary Science. Sewage and Industrial Wastes, vol. 27, No. 10, pp. 1183–1188.

Patrick, R.
1949. A Proposed Biological Measure of Stream Conditions Based on a Survey of the Conestoga Basin, Lancaster County, Pennsylvania. Proceedings of the Academy of Natural Sciences, Philadelphia, Pennsylvania, vol. 101, pp. 277–341.

Patrick, R.
1950. Biological Measure of Stream Conditions. Sewage and Industrial Wastes, vol. 22, No. 7, pp. 926–938.

Patrick, R.
1953. Aquatic Organisms as an Aid in Solving Waste Disposal. Sewage and Industrial Wastes, vol. 25, No. 2, pp. 210–214: Discussion by A. R. Gaufin and C. M. Tarzwell, pp. 214–217. Discussion by R. Patrick, p. 217.

Patrick, R.
1959. Certain Species Predominate in the Fauna and Flora Which Establish Aquatic Life in a New Stream. Water and Sewage Works, vol. 106, No. 12, pp. 531–535.

Patrick, R.
1962. A Study of the Numbers and Kinds of Species Found in Rivers in Eastern U. S. Proceedings of the Philadelphia Academy of Natural Sciences, Philadelphia, vol. 113, No. 10, pp. 215–218.

Pentelow, F. T. K.
1956. The Biology of Rivers in Relation to Pollution. Journal of the Institution of Public Health Engineers, vol. 55, pp. 85–101.

Purdy, W. C.
1926. The Biology of Polluted Water. Journal of the American Water Works Association, vol. 16, No. 1, pp. 45–54.

Ricker, W. E.
1946. Industrial and Domestic Wastes in Relation to the Aquatic Life of Indiana Streams. Proceedings of the Second Industrial Waste Conference, Purdue University, pp. 90–96.

SCOTT, D. C.
1958. Biological Balance in Streams. Sewage and Industrial Wastes, vol. 30, No. 9, pp. 1169–1172.

SURBER, E. W.
1953. Some Important Biological Effects Michigan Waters. Sewage and Industrial Wastes, vol. 25, No. 1, pp. 79–86.

SUTTER, R. and E. MOORE
1922. Stream Pollution Studies. State of New York Conservation Commission, Albany, New York, pp. 3–27.

TARZWELL, C. M. and A. R. GAUFIN
1953. Some Important Biological Effects of Pollution Often Disregarded in Stream Surveys. Purdue University Engineering Bulletin, Proceedings of the 8th Industrial Waste Conference (May 4–6, 1953), pp. 295–316.

TARZWELL, C. M.
1958. Aquatic Biological Investigation as a Method of Evaluating the Self-Purification of a Stream. Technical Association of the Pulp and Paper Industry, vol. 41, No. 10, pp. 40A–58A.

TARZWELL, C. M. (ed.)
1965. Biological Problems in Water Pollution — Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 1–424.

VAN HORN, W. M.
1949. A Study of Kraft Pulping Wastes in Relation to the Aquatic Environment. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 49–55.

VAN HORN, W. M.
1952. Using Biology as a Tool in Stream Pollution Work. Sewage Works, vol. 23, No. 2, pp. 71–73.

ALGAE AND PLANKTON

ALLEN, M. M., G. P. FITZGERALD and G. A. ROHLICH
1964. The Effect of Dilution Media on the B.O.D. of Algae. Journal of the Water Pollution Control Federation, vol. 36, No. 8, pp. 1049–1056.

AMBERG, H. R., J. F. CORMACK and M. R. RIVERS
1962. Slime Growth Control by Intermittent Discharge of Spent Sulphite Liquor. Technical Association of the Pulp and Paper Industry, vol. 45, No. 8, pp. 770–779.

BARTSCH, A. F.
1960. Algae in Relation to Oxidation Processes in Natural Waters. In: Ecology of Algae, Pymatuning Special Publication No. 2, University of Pittsburgh, Pittsburgh, Pennsylvania, pp. 56–71.

BENOIT, R. J. and J. J. CURRY
1960. Algae Blooms in Lake Zoar, Connecticut. In: Algae and Metropolitan Wastes,—Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 18–22.

BIRGE, E. A. and C. JUDAY
1922. The Inland Lakes of Wisconsin. The Plankton. I. Its Quantity and Chemical Composition. Wisconsin Geological Natural History Survey, Bulletin 64, Science Series 1, No. 3, pp. 1–222.

BLUM, J. L.
1956. The Ecology of River Algae. Botanical Review, vol. 22, No. 5, pp. 291–341.

BLUM, J. L.
1960. Algal Populations in Flowing Waters. The Ecology of Algae, Pymatuning Special Publication No 2, University of Pittsburgh, Pittsburgh, Pennsylvania, pp. 11–21.

BORCHARDT, J. A.
1958. The Role of Algae in Pollution Abatement. Public Works, vol. 89, No. 12, pp. 109–110.

BRINLEY, F. J.
1942. The Effect of Pollution upon the Plankton Population of the White River, Indiana. Indiana Department of Conservation, Investigations of Indiana Lakes and Streams, vol. 2, pp. 137-143.

BRINLEY, F. J.
1942. The Effect of the Sewage from Nashville upon the Plankton of the Cumberland River. Journal of the Tennessee Academy of Science, vol. 7, No. 2, pp. 179–183.

BRINLEY, F. J. and L. J. KATZIN
1942. Distribution of Stream Plankton in the Ohio River System. American Midland Naturalist, vol. 27, No. 1, pp. 177–182.

BROOK, A. J.
1965. Planktonic Algae as Indicators of Lake Types, with Special Reference to the Desmidiaceae. Limnology and Oceanography, vol. 10, No. 3, pp. 403–411.

CALAWAY, W. T. and J. B. LACKEY
1962. Waste Treatment Protozoa, Flagellata. University of Florida, College of Engineering, Florida Engineering Series No. 3, pp. 1–140.

CASTENHOLZ, R. W.
1960. Seasonal Changes in the Attached Algae of Freshwater and Saline Lakes in the Lower Grand Coulee, Washington. Limnology and Oceanography, vol. 5, No. 1, pp. 1–28.

COPELAND, B. J., K. W. MINTER and T. C. DORRIS
1964. Chlorophyll A and Suspended Organic Matter in Oil Refinery Effluent Holding Ponds. Limnology and Oceanography, vol. 9, No. 4, pp. 500–506.

DAMANN, K. E.
1960. Plankton Studies of Lake Michigan. II. Thirty-Three Years of Continuous Plankton and Coliform Bacterial Data Collected from Lake Michigan at Chicago, Illinois. Transactions of the American Microscopical Society, vol. 79, No. 4, pp. 397–404.

DAVIDSON, F. F.
1961. Antibacterial Activity of *Oscillatoria formosa* Bory Extract. Water and Sewage Works, vol. 108. No. 11, pp. 417–420.

DAVIS, C. C.
1955. Stream Pollution. Plankton and Industrial Pollution in Cleveland Harbor. Sewage and Industrial Wastes, vol. 27, No. 7, pp. 835-850.

DAVIS, C. C.
1962. The Plankton of the Cleveland Harbor Area of Lake Erie in 1956–1957. Ecological Monographs, vol. 32, No. 3, pp. 209–247.

DAVIS, C. C.
1964. Evidence for the Eutrophication of Lake Erie from Phytoplankton Records. Limnology and Oceanography, vol. 9, No. 3, pp. 275–283.

DEAN, J. M.
1964. The Effect of Sewage on a Chain of Lakes in Indiana. Hydrobiologia, vol. 24, Nos. 1–3, pp. 434–440.

EDMONDS, W. R.
1963. United States-Canada Boundary Water Pollution Studies. Journal of the Water Pollution Control Federation, vol. 35, No. 10, pp. 1339–1344.

FOGG, C. E.
1953. The Metabolism of Algae. John Wiley and Sons, New York, 149 pp.

GERLOFF, G. C., G. P. FITZGERALD and F. SKOOG
1950. The Isolation, Purification and Culture of Blue-Green Algae. American Journal of Botany, vol. 37, No. 3, pp. 216-218.

GOERING, J. J. and J. C. NEESS
1964. Nitrogen Fixation in Two Wisconsin Lakes. Limnology and Oceanography, vol. 9, No. 4, pp. 530–539.

GOLDMAN, C. R. and R. C. CARTER
1965. An Investigation by Rapid Carbon–14 Bio-assay of Factors Affecting the Cultural Eutrophication of Lake Tahoe, California. Journal of the Water Pollution Control Federation, vol. 37, No. 7, pp. 1044–1059.

GREENBERG, A. E.
1964. Plankton of the Sacramento River. Ecology, vol. 45, No. 1, pp. 40–49.

HARTMAN, R. T.
1960. Algae and Metabolites of Natural Waters. The Ecology of Algae, Pymatuning Special Publication No. 2, University of Pittsburgh, Pittsburgh, Pennsylvania, pp. 38–55.

HOHN, M.
1961. Determining the Pattern of the Diatom Flora. Journal of the Water Pollution Control Federation, vol. 33, No. 1, pp. 48–53.

HOHN, M.
1961. The Relationship Between Species Diversity and Population Density in Diatom Populations from Silver Springs, Florida. Transactions of the American Microscopical Society, vol. 80, No. 2, pp. 140–165.

Krauss, R. W.
1956. Photosynthesis in the Algae. Industrial and Engineering Chemistry, vol. 48, No. 9, pp. 1449–1455.

Krauss, R. W.
1960. Fundamental Characteristics of Algal Physiology. In: Algae and Metropolitan Wastes. Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 40–47.

Lackey, J. B.
1938. A Study of Some Ecological Factors Affecting the Distribution of Protozoa. Ecological Monographs, vol. 8, No. 4, pp. 501–527.

Lackey, J. B. and R. S. Smith
1940. Limitation of Euglenidae as Polluted Water Indicators. Public Health Reports, vol. 55, No. 7, pp. 268–280.

Lackey, J. B.
1941. Two Groups of Flagellated Algae Serving as Indicators of Clean Water. Journal of the American Water Works Association, vol. 33, No. 6, pp. 1099–1110.

Lackey, J. B.
1941. The Significance of Plankton in Relation to the Sanitary Condition of Streams. In: Symposium on Hydrobiology, University of Wisconsin Press, Madison, Wisconsin, pp. 311-328.

Lackey, J. B., E. Wattie, et al.
1943. Some Plankton Relationships in a Small Unpolluted Stream. American Midland Naturalist, vol. 30, No. 2, pp. 403–425.

Lackey, J. B.
1945. Plankton Productivity of Certain Southeastern Wisconsin Lakes as Related to Fertilization. II. Productivity. Sewage Works Journal, vol. 17, No. 4, pp. 795–802.

Lackey, J. B. and C. N. Sawyer
1945. Plankton Productivity of Certain Southeastern Wisconsin Lakes as Related to Fertilization. I. Surveys. Sewage Works Journal, vol. 17, No. 3, pp. 573-585.

Lackey, J. B.
1949. Plankton as Related to Nuisance Conditions in Surface Water. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 56–63.

Lackey, J. B.
1956. Stream Enrichment and Microbiota. Public Health Reports, vol. 71, No. 7, pp. 708-718.

Lackey, J. B.
1957. Protozoa as Indicators of the Ecological Conditions of a Body of Water. In: Biological Problems in Water Pollution—Transactions of the Seminar on Biological Problems in Water Pollution, Robert A. Taft Sanitary Engineering Center, U. S. Public Health Service, Cincinnati, Ohio, pp. 50–59.

Mackenthun, K. M., L. A. Lueschow and C. D. McNabb
1960. A Study of the Effects of Diverting the Effluent from Sewage Treatment upon the Receiving Stream. Wisconsin Academy of Sciences, Arts and Letters, vol. 49, pp. 51–72.

Mayer, A. M., A. Eisenberg and M. Evanari
1956. Studies on The Mass Culture of Algae in Israel. Scientific Monthly, vol. 83, No. 10, pp. 198–203.

McNabb, C. D.
1960. Enumeration of Freshwater Phytoplankton Concentrated on the Membrane Filter. Limnology and Oceanography, vol. 5, No. 1, pp. 57–61.

Mehsen, J. J.
1953. Microbiological Study of Acid Mine Waters: Preliminary Report. Ohio Journal of Science, vol. 53, No. 2, pp. 123–127.

Palmer, C. M. and W. M. Ingram
1955. Suggested Classification of Algae and Protozoa in Sanitary Science. Sewage and Industrial Wastes, vol. 27, No. 10, pp. 1183–1188.

Palmer, C. M.
1959. Algae in Water Supplies. An Illustrated Manual on the Identification, Significance, and Control of Algae in Water Supplies. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 657, pp. 1–88.

Palmer, C. M.
1965. Phytoplankton Periodicity in a

Newfoundland Pond. Journal of Phycology, vol. 1, No. 1, pp. 39–40.

Patrick, R.
1948. Factors Affecting the Distribution of Diatoms. Botanical Review, vol. 14, No. 8, pp. 473–524.

Patrick, R.
1964. A Discussion of Natural and Abnormal Diatom Communities. In: Jackson, D. F. (ed.), Algae and Man. Plenum Press, New York, pp. 185–204.

Pipes, W. O., Jr.
1961. Algae Growth Rate. Water and Sewage Works, vol. 108, No. 5, pp. 176–179.

Prescott, G. W.
1956. A Guide to the Literature on Ecology and Life Histories of the Algae. Botanical Review, vol. 20, No. 3, pp. 161–240.

Prescott, G. W.
1960. Biological Disturbances Resulting from Algal Populations in Standing Waters. The Ecology of Algae, Pymatuning Special Publication No. 2. University of Pittsburgh, Pittsburgh, Pennsylvania, pp. 22–37.

Provasoli, L. and I. J. Pintner
1960. Artificial Media for Fresh-water Algae: Problems and Suggestions. The Ecology of Algae, Pymatuning Special Publication No. 2. University of Pittsburgh, Pittsburgh, Pennsylvania, pp. 84–96.

Purdy, W. C.
1937. Experimental Studies of Natural Purification in Polluted Waters. X. Reoxygenation of Polluted Waters by Microscopic Algae. Public Health Reports, vol. 52, No. 29, pp. 945-978.

Reed, E. B. and J. R. Olive
1956. Annual Cycle of Net Plankton in a Fluctuating North Central Colorado Reservoir. Ecology, vol. 37, No. 10, pp. 713–719.

Rohlich, G. A. and W. B. Sarles
1949. Chemical Composition of Algae and Its Relationship to Taste and Odor. Taste and Odor Control Journal, vol. 15, No. 6, pp. 1–12.

Ryther, J. H.
1960. Organic Production by Plankton Algae, and Its Environmental Control. The Ecology of Algae, Pymatuning Special Publication No. 2. University of Pittsburgh, Pittsburgh, Pennsylvania, pp. 72–83.

Sawyer, C. N.
1962. Causes, Effects, and Control of Aquatic Growths. Journal of the Water Pollution Control Federation, vol. 34, No. 3, pp. 279–290.

Schuette, H. A. and H. Adler
1929. A Note on the Chemical Composition of Chara from Green Lake, Wisconsin. Wisconsin Academy of Sciences, Arts and Letters, vol. 24, pp. 141–145.

Schumacher, G. J.
1956. A Qualitative and Quantitative Study of the Plankton Algae in Southwestern Georgia. American Midland Naturalist, vol. 56, No. 7, pp. 88–115.

Shapiro, J. and R. Ribeiro
965. Algal Growth and Sewage Effluent in the Potomac Estuary. Journal of the Water Pollution Control Federation, vol. 37, No. 7, pp. 1034–1043.

Silva, P. C. and G. F. Papenfuss
1953. A Systematic Study of the Algae of Sewage Oxidation Ponds. State Water Pollution Control Board, Sacramento, California, Publication No. 7, pp. 1–35.

Talling, J. F.
1960. Comparative Laboratory and Field Studies of Photosynthesis by a Marine Planktonic Diatom. Limnology and Oceanography, vol. 5, No. 1, pp. 62–77.

Tucker, A.
1957. The Relation of Phytoplankton Periodicity to the Nature of the Physico-Chemical Environment with Special Reference to Phosphorus. II. Seasonal and Vertical Distribution of the Phytoplankton in Relation to the Environment. American Midland Naturalist, vol. 57, No. 4, pp. 334–370.

Whitford, L. A.
1960. Ecological Distribution of Fresh-Water Algae. The Ecology of Algae, Pymatuning Special Publication No. 2. University of Pittsburgh, Pittsburgh, Pennsylvania, pp. 2–10.

TOXIC ALGAE

Ashworth, C. T. and M. F. Mason
1946. Observations on the Pathological Changes Produced by a Toxic Substance Present in Blue-Green Algae *(Microcystis aeruginosa)*. American Journal of Pathology, vol. 22, No. 2, pp. 369–384.

Brandenburg, T. O. and F. M. Shigley
1947. "Water Bloom" as a Cause of Poisoning in Livestock in North Dakota. Journal of the American Veterinary Medical Association, vol. 110, No. 843, pp. 384-385.

Davidson, F. F.
1959. Poisoning of Wild and Domestic Animals by a Toxic Waterbloom of *Nostoc rivulare* Kuetz. Journal of the American Water Works Association, vol. 51, No. 10, pp. 1277–1287.

Deem, A. W. and F. Thorp
1939. Toxic Algae in Colorado. Journal of the American Veterinary Medical Association, vol. 95, No. 752, pp. 542–544.

Fitch, C. P., L. M. Bishop, et al.
1934. "Water Bloom" as a Cause of Poisoning in Domestic Animals. Cornell Veterinarian, vol. 24, No. 1, pp. 30–39.

Gorham, P. R.
1962. Laboratory Studies on the Toxins Produced by Waterblooms of Blue-green Algae. American Journal of Public Health, vol. 52, No. 12, pp. 2100–2105.

Gorham, P. R.
1964. Toxic Algae. In: Jackson, D. F. (ed.), Algae and Man, Plenum Press, New York, pp. 307–336.

Gorham, P. R.
1964. Toxic Algae as a Public Health Hazard. Journal of the American Water Works Association, vol. 56, No. 11, pp. 1481–1488.

Grant, G. A. and E. O. Hughes
1953. Development of Toxicity in Blue-Green Algae. Canadian Journal of Public Health, vol. 44, No. 9, pp. 334–338.

Howard, N. J. and A. E. Berry
1933. Algae Nuisances in Surface Waters. Canadian Journal of Public Health, vol. 24, No. 7, pp. 377–384.

Hughes, E. O., P. R. Gorham and A. Zehnder
1958. Toxicity of a Unialgal Culture of *Microcystis aeruginosa*. Canadian Journal of Microbiology, vol. 4, No. 6, pp. 225–236.

Ingram, W. M. and G. W. Prescott
1954. Toxic Fresh-Water Algae. American Midland Naturalist, vol. 52, No. 1, pp. 75–87.

Kalmbach, E. R.
1934. Western Duck Sickness a Form of Botulism (With Bacteriological Contributions by M. G. Gunderson). U. S. Department of Agriculture, Technical Bulletin No. 411, pp. 1–81.

Louw, P. G. J.
1950. The Active Constituent of the Poisonous Algae, *Microcystis toxica* Stephens. South African Industrial Chemistry, vol. 4, pp. 62–66.

Mackenthun, K. M., E. F. Herman and A. F. Bartsch
1948. A Heavy Mortality of Fishes Resulting from the Decomposition of Algae in the Yahara River, Wisconsin. Transactions of the American Fisheries Society, vol. 75 (1945), pp. 175–180.

Mason, M. F. and R. E. Wheeler
1942. Observations Upon the Toxicity of Blue-Green Algae. Federation Proceedings (The American Society of Biological Chemists), vol. 1, p. 124.

McLeod, J. A. and G. F. Bondar
1952. A Case of Suspected Algal Poisoning in Manitoba. Canadian Journal of Public Health, vol. 43, No. 9, pp. 374–350.

O'Donoghue, J. G. and G. S. Wilson
1951. Algal Poisoning in Alberta. Canadian Journal of Comparative Medicine, vol. 15, No. 8, pp. 193–198.

Olson, T. A.
1952. Toxic Plankton. Water and Sewage Works, vol. 99, No. 2, pp. 75–77.

Prescott, G. W.
1933. Some Effects of the Blue-Green Algae, *Aphanizomenon flos aquae* on Lake Fish. The Collecting Net, vol. 8, No. 4, pp. 77–80.

Prescott, G. W.
1939. Some Relationships of Phytoplankton to Limnology and Aquatic Biology. In: Problems of Lake Biology. American Association for the Advancement of Science, Washington, D. C., Publication No. 10, pp. 65–78.

Prescott, G. W.
1948. Objectionable Algae with Reference to the Killing of Fish and Other Animals. Hydrobiologia, vol. 1, No. 1, pp. 1–13.

Quin, A. H.
1943. Sheep Poisoning by Algae. Journal of the American Veterinary Medical Association, vol. 102, No. 793, pp. 1–299.

Rose, E. T.
1953. Toxic Algae in Iowa Lakes. Iowa Academy of Science, vol. 60, pp. 738–745.

Schwimmer, M. and D. Schwimmer
1955. The Role of Algae and Plankton in Medicine. Grune and Stratton Publishers, New York, 85 pp.

Schwimmer, D. and M. Schwimmer
1964. Algae and Medicine. In: Jackson, D. F. (ed.), Algae and Man, Plenum Press, New York, pp. 368-412.

Senior, V. E.
1960. Algal Poisoning in Saskatchewan. Canadian Journal of Comparative Medicine and Veterinary Science, vol. 24, No. 1, pp. 26–30.

Smit, J. D.
1950. Experimental Cases of Algae Poisoning in Small Animals. South African Industrial Chemistry, vol. 4, pp. 1–66.

Stephens, E. L.
1948. *Microcystis toxica* sp. nov. A Poisonous Alga from the Transvaal and Orange Free State. Hydrobiologia, vol. 1, No. 1, pp. 1–14.

Stewart, A. G., D. A. Barnum and J. A. Henderson
1950. Algal Poisoning in Ontario, Canada. Canadian Journal of Comparative Medicine, vol. 14, No. 6, pp. 197–202.

Steyn, D. G.
1943. Poisoning of Animals by Algae in Dams and Pans. Farming in South Africa, vol. 18, No. 208, pp. 489–492, 510.

Steyn, D. G.
1944. Poisonous and Non-Poisonous Algae (Waterbloom, Scum) in Dams and Pans. Farming in South Africa, vol. 19, No. 220, pp. 465–466, 472.

Steyn, D. G.
1945. Poisoning of Animals and Human Beings by Algae. South African Journal of Science, vol. 41, pp. 243–244.

Steyn, D. G.
1945. Poisoning of Animals by Algae (Scum or Waterbloom) in Dams and Pans. Union of South Africa, Department of Agriculture and Forestry, Pub. at Pretoria, South Africa, pp. 1–8.

Wheeler, R. E., J. B. Lackey and S. Schott
1942. A Contribution on the Toxicity of Algae. Public Health Reports, vol. 57, No. 45, pp. 1695–1701.

FUNGI

Becker, J. G. and C. G. Shaw
1955. Fungi in Domestic Sewage-Treatment Plants. Applied Microbiology, vol. 3, No. 3, pp. 173–180.

Cawley, W. A.
1958. An Effect of Biological Imbalance in Streams. Sewage and Industrial Wastes, vol. 30, No. 9, pp. 1174–1182.

Cooke, W. B.
1954. Fungi in Polluted Water and Sewage. I. Literature Review. Sewage and Industrial Wastes, vol. 26, No. 4, pp. 539–549.

Cooke, W. B.
1954. Fungi in Polluted Water and Sewage. II. Isolation Technique. Sewage and Industrial Wastes, vol. 26, No. 5, pp. 661-674.

Cooke, W. B.
1954. Fungi in Polluted Water and Sewage. III. Fungi in a Small Polluted Stream. Sewage and Industrial Wastes, vol. 26, No. 6, pp. 790–794.

COOKE, W. B., W. A. MOORE and P. W. KABLER

1956. B.O.D. Satisfaction by Fungi. Sewage and Industrial Wastes, vol. 28, No. 9, pp. 1075–1086.

COOKE, W. B. and K. A. BUSCH

1957. Activity of Cellulose-Decomposing Fungi Isolated from Sewage-Polluted Water. Sewage and Industrial Wastes, vol. 29, No. 2, pp. 210–217.

COOKE, W. B.

1959. Fungi in Polluted Water and Sewage. IV. The Occurrence of Fungi in a Trickling Filter-type Sewage Treatment Plant. Proceedings of the 13th Industrial Waste Conference, Purdue University, Series No. 96, vol. 48, No. 3, pp. 26–45.

COOKE, W. B.

1959. Trickling Filter Ecology. Ecology, vol. 40, No. 2, pp. 273–291.

COOKE, W. B. and A. F. BARTSCH

1959. Aquatic Fungi in Water with High Waste Loads. Sewage and Industrial Wastes, vol. 31, No. 11, pp. 1316–1322.

COOKE, W. B.

1961. Pollution Effects on the Fungus Population of a Stream. Ecology, vol. 42, No. 1, pp. 1–18.

COOKE, W. B.

1963. Fungi Associated with Spent Sulfite Liquor Disposal in a Natural Sand Bed. Technical Association of the Pulp and Paper Industry, vol. 46, pp. 573–578.

FELDMAN, A. E.

1955. Fungi from Trickling Filters. Sewage and Industrial Wastes, vol. 27, No. 11, pp. 1243–1244.

HAENSELER, C. M., W. P. MOORE and J. G. GAINS

1923. Fungi and Algae of Sprinkling Filters. New Jersey Agricultural Experiment Station Bulletin, No. 390, pp. 39–48.

HESSELTINE, C. W.

1953. Study of Trickling Filter Fungi. Bulletin of the Torrey Botanical Club, vol. 80, No. 6, pp. 507–514.

POTTER, L. F. and G. E. BAKER

1961. The Microbiology of Flathead and Rogers Lakes, Montana. II. Vertical Distribution of the Microbial Populations and Chemical Analyses of Their Environments. Ecology, vol. 42, No. 2, pp. 338–348.

SILVEY, J. K. G.

1963. The Role of Aquatic Actinomycetes in Self-Purification of Fresh Water Streams. International Journal of Air and Water Pollution, vol. 7, Nos. 4–5, pp. 399-412.

BOTTOM ORGANISMS

BAKER, F. C.

1922. The Molluscan Fauna of the Big Vermilion River, Illinois, with Special Reference to its Modification as the Result of Pollution by Sewage and Manufacturing Wastes. Illinois Biological Monographs, vol. 7, No. 2, pp. 105–224.

BAKER, F. C.

1926. The Changes in the Bottom Fauna of the Illinois River Due to Pollutional Causes. Ecology, vol. 7, No. 2, pp. 229–230.

BEETON, A. M.

1965. Eutrophication of the St. Lawrence Great Lakes. Limnology and Oceanography, vol. 10, No. 2, pp. 240–254.

CARR, J. F. and J. K. HILTUNEN

1965. Changes in the Bottom Fauna of Western Lake Erie from 1930 to 1961. Limnology and Oceanography, vol. 10, No. 4, pp. 551-569.

DEAN, J. M.

1964. The Effect of Sewage on a Chain of Lakes in Indiana. Hydrobiologia, vol. 24, Nos. 1–3, pp. 434–440.

DORRIS, T. C. and B. J. COPELAND

1962. Limnology of the Middle Mississippi River. III. Mayfly Populations in Relation to Navigation Water-Level Control. Limnology and Oceanography, vol. 7, No. 2, pp. 240–247.

EDMONDS, W. R.

1963. United States-Canada Boundary Water Pollution Studies. Journal of the Water Pollution Control Federation, vol. 35, No. 10, pp. 1339–1344.

ELLIS, R. J.

1961. A Life History of *Asellus inter-*

medius Forbes. Transactions of the American Microscopical Society, vol. 80, No. 1, pp. 88–102.

FREMLING, C. R.
1964. Mayfly Distribution Indicates Water Quality on the Upper Mississippi River. Science, vol. 146, pp. 1164–1166.

GAUFIN, A. R. and C. M. TARZWELL
1952. Aquatic Invertebrates as Indicators of Stream Pollution. Public Health Reports, vol. 67, No. 1, pp. 57–64.

GAUFIN, A. R. and C. M. TARZWELL
1955. Environmental Changes in a Polluted Stream During Winter. American Midland Naturalist, vol. 54, No. 1, pp. 78–88.

GAUFIN, A. R. and C. M. TARZWELL
1956. Aquatic Macro-invertebrate Communities as Indicators of Organic Pollution in Lytle Creek. Sewage and Industrial Wastes, vol. 28, No. 7, pp. 906–924.

GAUFIN, A. R.
1958. The Effects of Pollution on a Midwestern Stream. Ohio Journal of Science, vol. 58, No. 4, pp. 197–208.

HATCHETT, S. P.
1947. Biology of the Isopoda of Michigan. Ecological Monographs, vol. 17, No. 1, pp. 47–79.

HAWKES, H. A.
1963. Effects of Domestic and Industrial Discharge on the Ecology of Riffles in Midland Streams. International Journal of Air and Water Pollution, vol. 7, Nos. 6–7, pp. 565–586.

HENDERSON, C.
1949. Value of the Bottom Sampler in Demonstrating the Effects of Pollution on Fish Food. Progressive Fish Culturist, vol. 11, No. 4, pp. 217–230.

HUNT, G. S.
1962. Water Pollution and the Ecology of Some Aquatic Invertebrates in the Lower Detroit River. Great Lakes Research Division, University of Michigan, Publication No. 9, pp. 29–49.

HYNES, H. B. N.
1965. The Significance of Macroinvertebrates in the Study of Mild River Pollution. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 235–240.

INGRAM, W. M.
1948. The Larger Freshwater Clams of California, Oregon, and Washington. Journal of Entomology and Zoology, vol. 40, No. 4, pp. 72–92.

KEUP, L. E., W. M. INGRAM, J. R. GECKLER and W. B. HORNING, II
1965. Biology of Chicago's Waterways. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–32, pp. 1–20.

KING, D. L. and R. C. BALL
1964. A Quantitative Biological Measure of Stream Pollution. Journal of the Water Pollution Control Federation, vol. 36, No. 5, pp. 650–653.

PAINE, G. H., JR. and A. R. GAUFIN
1956. Aquatic Diptera as Indicators of Pollution in a Midwestern Stream. Ohio Journal of Science, vol. 56, No. 6, pp. 291–304.

PALOUMPIS, A. A. and W. C. STARRETT
1960. An Ecological Study of Benthic Organisms in Three Illinois River Flood Plain Lakes. American Midland Naturalist, vol. 64, No. 2, pp. 406–435.

PATRICK, R.
1959. Aquatic Life in a New Stream. Water and Sewage Works, vol. 106, No. 12, pp. 531–535.

PENNAK, R. W. and E. D. VAN GERPEN
1947. Bottom Fauna Production and Physical Nature of the Substrate in a Northern Colorado Trout Stream. Ecology, vol, 28, No. 1, pp. 42–48.

RICHARDSON, R. C.
1925. Changes in the Small Bottom Fauna of Peoria Lake, 1920–1922. Illinois Natural History Survey, Bulletin 15, No. 5, pp. 327–388.

SOUTHGATE, B. A.
1948. Treatment and Disposal of Industrial Waste Waters. Chapter 1, Polluting Effects of Industrial Waste Waters, pp. 1–13. Department of Scientific and Industrial Research, His Majesty's Stationery Office, London, pp. 1–327.

SUBLETT, J. E.
1957. The Ecology of the Macroscopic Bottom Fauna in Lake Texoma (Denison Reservoir), Oklahoma and Texas. American Midland Naturalist, vol. 57, No. 4, pp. 371–402.

SURBER, E. W.
1953. Biological Effects of Pollution in Michigan Lakes. Sewage and Industrial Wastes, vol. 25, No. 1, pp. 79–86.

SURBER, E. W.
1959. *Cricotopus bicinctus*, a Midgefly Resistant to Electroplating Wastes. Transactions of the American Fisheries Society, vol. 88, No. 2, pp. 111–116.

TEBO, L. B., JR.
1955. Effects of Siltation, Resulting from Improper Logging, on the Bottom Fauna of a Small Trout Stream in the Southern Appalachians. Progressive Fish Culturist, vol. 17, No. 2, pp. 64–70.

WARREN, C. E., J. H. WALES, G. E. DAVIS and P. DOUDOROFF
1964. Trout Production in an Experimental Stream Enriched with Sucrose. Journal of Wildlife Management, vol. 28, No. 4, pp. 617–660.

WESTLAKE, D. F.
1959. Effects of Organisms on Pollution. Proceedings of the Limnological Society, vol. 170, pp. 171–172. Journal of the Science of Food and Agriculture, vol. 10, 104 pp.

WILSON, J. N.
1953. Effect of Kraft Mill Wastes on Stream Bottom Fauna. Sewage and Industrial Wastes, vol. 25, No. 10, pp. 1210–1218.

WURTZ, C. B.
1956. Freshwater Mollusks and Stream Pollution. The Nautilus, vol. 69, No. 3, pp. 96-100.

YOUNG, F. N.
1960. Effects of Pollution on Natural Associations of Water Beetles. Proceedings of the 15th Industrial Waste Conference, Purdue University, vol. 15, No. 2, pp. 373–380.

INSECTS

ANDERSON, J. R. and R. J. DICKE
1960. Ecology of the Immature Stages of Some Wisconsin Black Flies (Simuliidae: Diptera). Annals of the Entomological Society of America, vol. 53, No. 3, pp. 386–404.

CURRY, L. L.
1954. Notes on the Ecology of the Midge Fauna (Diptera: Tendipedidae) of Hunt Creek, Montgomery County, Michigan. Ecology, vol. 35, No. 4, pp. 541–550.

EDWARDS, R. W.
1958. The Relation of Oxygen Consumption to Body Size and to Temperature in the Larvae of *Chironomus riparius* Meigen. Journal of Experimental Biology, vol. 35, pp. 383–395.

FELLTON, H. L.
1940. Control of Aquatic Midges with Notes on the Biology of Certain Species. Journal of Economic Entomology, vol. 33, No. 2, pp. 252–264.

FREMLING, C. R.
1960. Biology of a Large Mayfly, *Hexagenia bilineata* (Say), of the Upper Mississippi River. Agricultural and Home Economics Experiment Station, Iowa State University of Science and Technology, Ames, Iowa, Research Bulletin 482, pp. 842–851.

FREMLING, C. R.
1960. Biology and Possible Control of Nuisance Caddisflies of the Upper Mississippi River. Agricultural and Home Economics Experiment Station, Iowa State University of Science and Technology, Ames, Iowa, Research Bulletin 483, pp. 856–879.

PROVOST, M. W.
1958. Chironomids and Lake Nutrients in Florida. Sewage and Industrial Wastes, vol. 30, No. 11, pp. 1417–1419.

FISH

APPLEGATE, V. C., J. H. HOWELL and J. W. MOFFETT
1961. Use of 3-trifluormethyl—4-nitrophenol as a Selective Sea Lamprey Larvicide. Technical Report No. 1, Great Lakes Fishery Commission, pp. 1–35.

BALDWIN, R. E., D. H. STRONG and J. H. TORRIE

1961. Flavor and Aroma of Fish Taken from Four Fresh-Water Sources. Transactions of the American Fisheries Society, vol. 90, No. 2, pp. 175–180.

BLACK, E. C., F. E. J. FRY and V. S. BLACK
1954. The Influence of Carbon Dioxide on the Utilization of Oxygen by Some Fresh-Water Fish. Canadian Journal of Zoology, vol. 32, pp. 408–420.

BURDICK, G. E.
1954. An analysis of the Factors, Including Pollution, Having Possible Influence on the Abundance of Shad in the Hudson River. New York Fish and Game Journal, vol. 1, No. 2, pp. 188–205.

BURDICK, G. E., H. J. DEAN and E. J. HARRIS
1955. Toxicity of Emulsifiable Rotonone to Various Species of Fish. New York Fish and Game Journal, vol. 2, No. 1, pp. 36–67.

CROSS, F. B.
1950. Effects of Sewage and of a Headwaters Impoundment on the Fishes of Stillwater Creek in Payne County, Oklahoma. American Midland Naturalist, vol. 43, No. 1, pp. 128–145.

ESCHMEYER, R. W.
1950. Fish and Fishing in TVA Impoundments. Tennessee Department of Conservation, Nashville, pp. 1–28.

DAVIDSON, R. C., W. P. BREESE, C. E. WARREN and P. DOUDOROFF
1959. Experiments on the Dissolved Oxygen Requirements of Cold Water Fishes. Sewage and Industrial Wastes, vol. 31, No. 8, pp. 950–966.

DYMOND, J. R. and A. V. DELAPORTE
1952. Pollution of the Spanish River. Ontario Department of Lands and Forests, Research Report No. 25, pp. 1–106.

EDMONDS, W. R.
1963. United States-Canada Boundary Water Pollution Studies. Journal of the Water Pollution Control Federation, vol. 35, No. 10, pp. 1339–1344.

ENGLISH, J. N., E. W. SURBER and G. N. MCDERMOTT
1963. Pollutional Effects of Outboard Motor Exhaust—Field Studies. Journal of the Water Pollution Control Federation, vol. 35, No. 9, pp. 1121–1132.

JOB, J. V.
1955. The Oxygen Consumption of *Salvelinus fontinalis*. University of Toronto Biological Series No. 61, pp. 1–39.

JONES, B. F., C. E. WARREN, C. E. BOND and P. DOUDOROFF
1956. Avoidance Reactions of Salmonid Fishes to Pulp Mill Effluents. Sewage and Industrial Wastes, vol. 28, No. 11, pp. 1403–1413.

KATZ, M. and A. R. GAUFIN
1953. The Effects of Sewage Pollution on the Fish Population of a Midwestern Stream. Transactions of the American Fisheries Society, vol. 82, pp. 156–165.

KATZ, M. and W. C. HOWARD
1954. The Length and Growth of O-Year Class Creek Chubs in Relation to Domestic Sewage. Transactions of the American Fisheries Society, vol. 84, pp. 228–238.

KELLING, E. E.
1963. Minnow Population of Grimes Creek in Relation to Pollution. Proceedings of the Iowa Academy of Science, vol. 70, pp. 236–239.

KRUMHOLZ, L. A. and W. L. MINCKLEY
1964. Changes in the Fish Population in the Upper Ohio River Following Temporary Pollution Abatement. Transactions of the American Fisheries Society, vol. 93, No. 1, pp. 1–5.

LARIMORE, R. W. and P. W. SMITH
1963. The Fishes of Champaign County, Illinois, as Affected by 60 Years of Stream Changes. Illinois Natural History Survey, Bulletin, vol. 28, No. 2, pp. 299–382.

MACKENTHUN, K. M., E. F. HERMAN and A. F. BARTSCH
1948. A Heavy Mortality of Fishes Resulting from the Decomposition of Algae in the Yahara River, Wisconsin. Transactions of the American Fisheries Society, vol. 75, pp. 175–180.

OLSON, T. A.
1932. Some Observations on the Interrelationships of Sunlight, Aquatic Plant Life and Fishes. Read at Sixty-

Second Annual Meeting, American Fisheries Society, Baltimore, Maryland, pp. 1–11.

PAUTZKE, C. F.
1937. Studies on the Effect of Coal Washings on Steelheads and Cutthroat Trout. Transactions of the American Fisheries Society, vol. 67, pp. 232–233

SCHAUT, G. G.
1939. Fish Catastrophes During Droughts. Journal of the American Water Works Association, vol. 31, No. 5, pp. 771–882.

SCHIFFMAN, R. H. and P. O. FROMM
1959. Chromium-Induced Changes in the Blood of Rainbow Trout, *Salmo gairdnerii*. Sewage and Industrial Wastes, vol. 31, No. 2, pp. 205–211.

SHAW, P. A. and J. A. MAGA
1943. The Effects of Mining Silt on Yield of Fry from Salmon Spawning Beds. California Fish and Game, vol. 9, No. 1, pp. 29–41.

SMITH, O. R.
1939. Placer Mining Silt and Its Relation to Salmon and Trout on the Pacific Coast. Transactions of the American Fisheries Society, vol. 69, pp. 225–230.

SMITH, L. L., JR. and R. H. KRAMER
1963. Survival of Walleye Eggs in Relation to Wood Fibers and *Sphaerotilus natans* in the Rainy River, Minnesota. Transactions of the American Fisheries Society, vol. 92, No. 3, pp. 220–234.

SOUTHGATE, B. A.
1948. Treatment and Disposal of Industrial Waste Waters. Chapter III. Effects of Pollution on Fish, pp. 23–42. Department of Scientific and Industrial Research, His Majesty's Stationery Office, London, pp. 1–327.

TAYLOR, C. C.
1951. A survey of Former Shad Streams in Maine. U. S. Fish and Wildlife Service, Special Scientific Report No. 66, pp. 1–29.

VAN HORN, W. M. and R. F. BALCH
1957. The Reaction of Walleyed Pike Eggs to Reduced Dissolved Oxygen Concentrations. Proceedings of the 11th Industrial Waste Conference, Purdue University Engineering Extension Series 91, pp. 319–333.

WALLEN, I. E.
1951. The Direct Effect of Turbidity on Fishes. Bulletin Oklahoma Agricultural and Mechanical College, vol. 48, No. 2, pp. 1–27.

WALKER, C. L., et al.
1923. Studies on the Treatment and Disposal of Dairy Wastes. Effects on Fish Life. Cornell University Agricultural Experiment Station, Bulletin 425, pp. 1–171.

WARREN, C. E., J. H. WALES, G. E. DAVIS and P. DOUDOROFF
1964. Trout Production in an Experimental Stream Enriched with Sucrose. Journal of Wildlife Management, vol. 28, No. 4, pp. 617–660.

WHITMORE, C. M., C. E. WARREN and P. DOUDOROFF
1960. Avoidance Reactions of Salmonid and Centrarchid Fishes to Low Oxygen Concentrations. Transactions of the American Fisheries Society, vol. 89, No. 1, pp. 17–26.

WIEBE, A. H.
1935. The Effect of Crude Oil on Fresh-Water Fish. Transactions of the American Fisheries Society, vol. 65, pp. 324–350.

WILDUNG, J. L.
1939. The Oxygen Threshold for Three Species of Fish. Ecology, vol. 20, pp. 253–263.

WOOD, E. M.
1960. Definite Diagnosis of Fish Mortalities. Sewage and Industrial Wastes, vol. 32, No. 9, pp. 994–999.

FLOWERING AQUATIC PLANTS

GORHAM, E. and A. G. GORDON
1963. Some Effects of Smelter Pollution upon Aquatic Vegetation near Sudbury, Ontario. Canadian Journal of Botany, vol. 41, pp. 371–378.

HARPER, H. J. and H. R. DANIEL
1939. Chemical Composition of Certain Aquatic Plants. Botanical Gazette, vol. 96, pp. 186–189.

MOYLE, J.
1945. Some Chemical Factors Influencing the Distribution of Aquatic Plants in Minnesota. American Midland Naturalist, vol. 34, No. 2, pp. 402–420.

PENFOUND, W. T. and T. T. EARLE
1948. The Biology of Water Hyacinth. Ecological Monographs, vol. 18, pp. 447–472.

RICKETT, H. W.
1922. A Quantitative Study of the Larger Aquatic Plants of Lake Mendota. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, vol. 20, pp. 501–527.

RICKETT, H. W.
1924. A Quantitative Study of the Larger Aquatic Plants of Green Lake, Wisconsin. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, vol. 21, pp. 381–414.

SCHUETTE, H. A. and A. E. HOFFMAN
1922. Notes on the Chemical Composition of Some of the Larger Aquatic Plants of Lake Mendota. I. *Cladophora* and *Myriophyllium*. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, vol. 20, pp. 529–531.

SCHUETTE, H. A. and H. ALDER
1928. Notes on the Chemical Composition of Some of the Larger Aquatic Plants of Lake Mendota. II. *Vallisneria* and *Potamogeton*. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, vol. 23, pp. 249–254.

SCHUETTE, H. A. and H. ALDER
1929. Notes on the Chemical Composition of Some of the Larger Aquatic Plants of Lake Mendota. III. *Castalia odorata* and *Najas flexilis*. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, vol. 24, pp. 135–139.

NUTRIENTS

ALLEN, M. B.
1955. General Features of Algal Growth in Sewage Oxidation Ponds. California State Water Pollution Control Board, Sacramento, Publication No. 13, pp. 1–48.

AMBERG, H. R., J. F. CORMACK and M. R. RIVERS
1962. Slime Growth Control by Intermittent Discharge of Spent Sulphite Liquor. Technical Association of the Pulp and Paper Industry, vol. 45. pp. 770–779.

ANDERSON, G. C.
1960. Recent Changes in the Trophic Nature of Lake Washington—A Review. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 27–33.

BALL, R. C.
1950. Fertilization of Natural Lakes in Michigan. Transactions of the American Fisheries Society, vol. 78, pp. 145–155.

BALL, R. C. and H. A. TANNER
1951. The Biological Effects of Fertilizer on a Warm-Water Lake. Michigan State College, Agricultural Experiment Station, Department of Zoology, East Lansing, Michigan, Technical Bulletin 223, pp. 1–32.

BEETON, A. M.
1965. Eutrophication of the St. Lawrence Great Lakes. Limnology and Oceanography, vol. 10, No. 2, pp. 240–254.

BENOIT, R. J. and J. J. CURRY
1960. Algae Blooms in Lake Zoar, Connecticut. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 18–22.

BOGAN, R. H.
1961. Removal of Sewage Nutrients by Algae. Public Health Reports, vol. 76, No. 4, pp. 301–308.

CURL, H., JR.
1959. The Origin and Distribution of Phosphorus in Western Lake Erie. Limnology and Oceanography, vol. 4, No. 1, pp. 66–76.

CURRY, J. J. and S. L. WILSON
1955. Effect of Sewage-borne Phosphorus on Algae. Sewage and Industrial Wastes, vol. 27, No. 11, pp. 1262–1266.

Daniel, H. A., et al.

1938. Nitrate Nitrogen Content of Rain and Runoff Water from Plots Under Different Cropping Systems on Soil Classified as Vernon Fine Sandy Loams. Soil Scientific Society of America Proceedings, vol. 3, pp. 230–233.

Dean, J. M.

1964. The Effect of Sewage on a Chain of Lakes in Indiana. Hydrobiologia, vol. 24, Nos. 1–3, pp. 434–440.

Dugdale, R. C. and J. C. Neess

1960. Recent Observations on Nitrogen Fixation in Blue-Green Algae. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, SEC TR W61–3, pp. 103–106.

Edmondson, W. T., G. C. Anderson and D. R. Peterson

1956. Artificial Eutrophication of Lake Washington. Limnology and Oceanography, vol. 1, No. 1, pp. 47–53.

Eldridge, E. F.

1963. Irrigation as a Source of Water Pollution. Journal of the Water Pollution Control Federation, vol. 35, No. 5, pp. 614–625.

Engelbrecht, R. S. and J. J. Morgan

1960. Land Drainage as a Source of Phosphorus in Illinois Surface Waters. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service Publication No. W61–3, pp. 74–79.

Eyster, C.

1964. Micronutrient Requirements for Green Plants, Especially Algae. In: Jackson, D. F. (ed.). Algae and Man, Plenum Press, New York, pp. 77–119.

Fippin, E. O.

1945. Plant Nutrient Losses in Silt and Water in the Tennessee River System. Soil Science, vol. 60, pp. 223–239.

Fitzgerald, G. P.

1961. Stripping Effluents of Nutrients by Biological Means. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 136–139.

Flaigg, N. G. and G. W. Reid

1954. Effects of Nitrogenous Compounds on Stream Conditions. Sewage and Industrial Wastes, vol. 26, No. 9, pp. 1145–1154.

Gerloff, G. and F. Skoog

1954. Cell Content of Nitrogen and Phosphorus as a Measure of their Availability for Growth of *Microcystis aeruginosa*. Ecology, vol. 35, No. 3, pp. 348–353.

Gerloff, G. and F. Skoog

1957. Availability of Iron and Manganese in Southern Wisconsin Lakes for the Growth of *Microcystis aeruginosa*. Ecology, vol. 38, No. 4, pp. 551–556.

Gerloff, G. and F. Skoog

1957. Nitrogen as a Limiting Factor for the Growth of *Microcystis aeruginosa* in Southern Wisconsin Lakes. Ecology, vol. 38, No. 4, pp. 556–561.

Goering, J. J. and J. C. Neess

1964. Nitrogen Fixation in Two Wisconsin Lakes. Limnology and Oceanography, vol. 9, No. 4, pp. 530–539.

Goldman, C. R. and R. C. Carter

1965. An Investigation by Rapid Carbon-14 Bioassay of Factors Affecting the Cultural Eutrophication of Lake Tahoe, California. Journal of the Water Pollution Control Federation, vol. 37, No. 7, pp. 1044–1059.

Hasler, A. D.

1947. Eutrophication of Lakes by Domestic Sewage. Ecology, vol. 28, No. 4, pp. 383-395.

Hurwitz, E., R. Beaudoin and W. Walters

1965. Phosphates, their Fate in a Sewage Treatment Plant-Waterway System. Water and Sewage Works, vol. 112, No. 3, pp. 84–89, 112.

Irgens, R. L. and H. O. Halvorson

1965. Removal of Plant Nutrients by Means of Aerobic Stabilization of Sludge. Applied Microbiology, vol. 13, No. 3, pp. 373–386.

Johnson, W. K. and G. J. Schroeffer

1964. Nitrogen Removal by Nitrification and Denitrification. Journal of the Water Pollution Control Federation, vol. 36, No. 8, pp. 1015–1036.

Krauss, R. W.

1960. Fundamental Characteristics of of Algal Physiology. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 40–47.

Lackey, J. B. and C. N. Sawyer

1945. Plankton Productivity of Certain Southeastern Wisconsin Lakes as Related to Fertilization. I. Surveys. Sewage Works Journal, vol. 17, No. 3, pp. 573–585.

Lackey, J. B.

1945. Plankton Productivity of Certain Southeastern Wisconsin Lakes as Related to Fertilization. II. Productivity. Sewage Works Journal, vol. 17, No. 4, pp. 795–802.

Lackey, J. B.

1958. Effects of Fertilization on Receiving Waters. Sewage and Industrial Wastes, vol. 30, No. 11, pp. 1411–1416.

Larson, W. C.

1961. Spray Irrigation for the Removal of Nutrients in Sewage Treatment Plant Effluent as Practiced at Detroit Lakes, Minnesota. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 125–129.

Lauff, G. H.

1960. The Role of Limnological Factors in the Availability of Algal Nutrients. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 96–99.

Lawton, G. W.

1960. The Madison Lakes Before and After Diversion. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 108–117.

Levin, G. V. and J. Shapiro

1965. Metabolic Uptake of Phosphorus by Wastewater Organisms. Journal of the Water Pollution Control Federation, vol. 37, No. 6, pp. 800–821.

Ludwig, H. F., E. Kazmierczak and R. C. Carter

1964. Waste Disposal and the Future at Lake Tahoe. Proceedings of the American Society of Civil Engineers, Journal of the Sanitary Engineering Division, vol. 90, No. SA3, pp. 27–51.

Mackenthun, K. M., L. A. Lueschow and C. D. McNabb

1960. A Study of the Effects of Diverting the Effluent from Sewage Treatment Upon the Receiving Stream. Wisconsin Academy of Sciences, Arts and Letters, vol. 49, pp. 51–72.

Mackenthun, K. M.

1962. A Review of Algae, Lake Weeds, and Nutrients. Journal of the Water Pollution Control Federation, vol. 34, No. 10, pp. 1077–1085.

Mackenthun, K. M., W. M. Ingram and R. Porges

1964. Nutrients and Biological Growths. In: Limnological Aspects of Recreational Lakes, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 1167, pp. 31–46.

Mackenthun, K. M.

1965. Nitrogen and Phosphorus in Water, An Annotated Selected Bibliography of Their Biological Effects. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 1305, pp. 1–111.

Mackenthun, K. M.

1965. The Effects of Nutrients on Photosynthetic Oxygen Production in Lakes and Reservoirs: In: Symposium on Streamflow Regulation for Quality Control, 1963, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–30, pp. 205–215.

McIntire, C. D. and C. E. Bond

1962. Effects of Artificial Fertilization on Plankton and Benthos Abundance in Four Experimental Ponds. Transactions of the American Fisheries Society, vol. 91, No. 3, pp. 303–312.

Neess, J. C.

1946. Development and Status of Pond Fertilization in Central Europe. Transactions of the American Fisheries Society, vol. 76, pp. 336–358.

NEIL, J. H.
1957. Problems and Control of Unnatural Fertilization of Lake Waters. Proceedings of the 12th Industrial Waste Conference, Purdue University, vol. 42, No. 3, pp. 301–316.

NICHOLS, M. S.
1965. Nitrates in the Environment. Journal of the American Water Works Association, vol. 57, No. 10, pp. 1319–1327.

OSWALD, W. J.
1960. Metropolitan Wastes and Algal Nutrition. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 88–95.

PALOUMPIS, A. A. and W. C. STARRETT
1960. An Ecological Study of Benthic Organisms in Three Illinois River Flood Plain Lakes. American Midland Naturalist, vol. 64, No. 2, pp. 406–425.

PHINNEY, H. K. and C. A. PEEK
1960. Klamath Lake, an Instance of Natural Enrichment. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 22–27.

PROVASOLI, L.
1960. Micronutrients and Heterotrophy as Possible Factors in Bloom Production in Natural Waters. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 48–56.

PROVOST, M. W.
1958. Chironomids and Lake Nutrients in Florida. Sewage and Industrial Wastes, vol. 30, No. 11, pp. 1417–1419.

RIGLER, F. H.
1964. The Phosphorus Fractions and the Turnover Time of Inorganic Phosphorus in Different Types of Lakes. Limnology and Oceanography, vol. 9, No. 4, pp. 511-518.

ROHLICH, G. A.
1961. Chemical Methods for the Removal of Nitrogen and Phosphorus from Sewage Plant Effluents. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 130–135.

ROHLICH, G. A.
1963. Methods for the Removal of Phosphorus and Nitrogen from Sewage Plant Effluents. International Journal of Air and Water Pollution, vol. 7, Nos. 4–5, pp. 427–434.

SANDERSON, W. W.
1953. Studies of the Character and Treatment of Waste from Duck Farms. Proceedings of the 8th Industrial Waste Conference, Purdue University, Extension Series, vol. 83, No. 1, pp. 170–176.

SAWYER, C. N., J. B. LACKEY and R. T. LENZ
1945. An Investigation of the Odor Nuisance Occurring in the Madison Lakes, Particularly Monona, Waubesa and Kegonsa from July 1942-July 1944. Report of Governor's Committee, Madison, Wisconsin, 2 vols.

SAWYER, C. N.
1947. Fertilization of Lakes by Agricultural and Urban Drainage. Journal of the New England Water Works Association, vol. 61, No. 2, pp. 109–127.

SAWYER, C. N.
1952. Some New Aspects of Phosphates in Relation to Lake Fertilization. Sewage and Industrial Wastes, vol. 24, No. 6, pp. 768–776.

SAWYER, C. N.
1954. Factors Involved in Disposal of Sewage Effluents to Lakes. Sewage and Industrial Wastes, vol. 26, No. 3, pp. 317–325.

SAWYER, C. N. and A. F. FERULLO
1960. Nitrogen Fixation in Natural Waters under Laboratory Conditions. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61–3, pp. 100–103.

SAWYER, C. N.
1962. Causes, Effects, and Control of

Aquatic Growths. Journal of the Water Pollution Control Federation, vol. 34, No. 3, pp. 279–290.

SAWYER, C. N.
1965. Problem of Phosphorus in Water Supplies. Journal of the American Water Works Association, vol. 57, No. 11, pp. 1431–1439.

SCHELSKE, C. L., F. F. HOOPER and E. J. HAERTL
1962. Responses of a Marl Lake to Chelated Iron and Fertilizer. Ecology, vol. 43, No. 4, pp. 646–653.

SHAPIRO, J. and R. RIBEIRO
1965. Algal Growth and Sewage Effluent in the Potomac Estuary. Journal of the Water Pollution Control Federation, vol. 37, No. 7, pp. 1034–1043.

SYLVESTER, R. O.
1960. Nutrient Content of Drainage Water from Forested, Urban, and Agricultural Areas. In: Algae and Metropolitan Wastes, Transactions of the 1960 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W61-3, pp. 80–87.

THOMAS, E. A.
1965. Eutrophication of Lakes and Rivers, Cause and Prevention. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 299–305.

WEIBEL, S. R., R. J. ANDERSON and R. L. WOODWARD
1964. Urban Land Runoff as a Factor in Stream Pollution. Journal of the Water Pollution Control Federation, vol. 36, No. 7, pp. 914–924.

WITT, V. M. and J. A. BORCHARDT
1960. The Removal of Nitrogen and Phosphorus from Sewage Effluents Through The Use of Algal Culture. Journal of Biochemical and Microbiological Technology and Engineering, vol. 2, No. 2, pp. 187–203.

WITT, V. M.
1963. Improvement of Domestic Sewage Effluents Through Nitrogen and Phosphorus Removal. Environmental Health, vol. 5, No. 2, p. 121.

INSECTICIDES AND THEIR EFFECT UPON AQUATIC LIFE

ALLISON, D. T., B. J. KALLMAN, O. B. COPE and C. VAN VALIN
1964. Some Chronic Effects of DDT on Cutthroat Trout. U. S. Fish and Wildlife Service, Research Report No. 64, pp. 1–28.

ANON.
1964. Pesticide-Wildlife Studies, 1963. A Review of Fish and Wildlife Service Investigations During the Calendar Year. U. S. Fish and Wildlife Service, Circular No. 199, pp. 1–129.

BISHOPP, F. C.
1950. An Expert Discusses Toxicity of Cotton Insecticides. Agricultural Chemicals, vol. 5, No. 5, pp. 30–32, 90–91.

BRIDGES, W. R., B. J. KALLMAN and A. K. ANDREWS
1963. Persistence of DDT and Its Metabolites in a Farm Pond. Transactions of the American Fisheries Society, vol. 92, No. 4, pp. 421–427.

BRIDGES, W. R.
1965. Effects of Time and Temperature on the Toxicity of Heptachlor and Kepone to Redear Sunfish. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 247–249.

BURDICK, G. E., E. J. HARRIS, H. J. DEAN, T. M. WALKER, J. SKEA and D. COLBY
1964. The Accumulation of DDT in Lake Trout and the Effect on Reproduction. Transactions of the American Fisheries Society, vol. 93, No. 2, pp. 127–136.

BYRD, I. B. and D. D. MOSS
1952. Public Lake and Stream Investigations in Alabama. State of Alabama, Department of Conservation, Division of Game and Fish, pp. 14–15.

CAIRNS, J., JR. and A. SCHEIER
1964. The Effect Upon the Pumpkinseed Sunfish *Lepomis gibbosus* (Linn.) of Chronic Exposure to Lethal and Sublethal Concentrations

of Dieldrin. Notulae Naturae of the Philadelphia Academy of Natural Sciences, No. 370, pp. 1–10.

COPE, O. B.
1960. The Retention of DDT by Trout and Whitefish. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Technical Report W60–3, pp. 72–75.

COPE, O. B.
1961. Effects of DDT Spraying for Spruce Budworm on Fish in the Yellowstone River System. Transactions of the American Fisheries Society, vol. 90, No. 3, pp. 239–251.

COPE, O. B.
1962. Effects of Pesticides on Fish and Wildlife in 1960. Effects on Sport Fisheries. U. S. Fish and Wildlife Service, Circular No. 143, pp. 1–16.

COUTANT, C. C.
1964. Insecticide Sevin: Effect of Aerial Spraying on Drift of Stream Insects. Science, vol. 146, pp. 420–421.

DOUDOROFF, P., M. KATZ and C. M. TARZWELL
1953. Toxicity of Some Organic Insecticides to Fish. Sewage and Industrial Wastes, vol. 25, No. 7, pp. 840–844.

GAUFIN, A. R.
1960. Bioassays to Determine the Toxicity of Pesticides to Aquatic Invertebrates. Proceedings of the 15th Industrial Waste Conference, Purdue University, vol. 45, No. 2, pp. 94–98.

GRZENDA, A. R., G. J. LAUER and H. P. NICHOLSON
1964. Water Pollution by Insecticides in an Agricultural River Basin. II. The Zooplankton, Bottom Fauna, and Fish. Limnology and Oceanography, vol. 9, No. 3, pp. 318–323.

HOFFMANN, C. H. and E. W. SURBER
1945. Effects of an Aerial Application of Wettable DDT on Fish and Fish-Food Organisms in Back Creek, West Virginia. Transactions of the American Fisheries Society, vol. 75, pp. 48–58.

HOFFMANN, C. H. and E. W. SURBER
1949. Effects of an Aerial Application of DDT on Fish and Fish-Food Organisms in Two Pennsylvania Watersheds. Progressive Fish Culturist, vol. 11, No. 4, pp. 203–211.

HOFFMAN, R. A.
1957. Toxicity of Three Phosphorus Insecticides to Cold Water Game Fish. Mosquito News, vol. 17, No. 3, p. 213.

JENSEN, L. D. and A. R. GAUFIN
1964. Effects of Ten Organic Insecticides on Two Species of Stonefly Naiads. Transactions of the American Fisheries Society, vol. 93, No. 1, pp. 27–34.

JENSEN, L. D. and A. R. GAUFIN
1964. Long-term Effects of Organic Insecticides on Two Species of Stonefly Naiads. Transactions of the American Fisheries Society, vol. 93, No. 4, pp. 357–363.

JONES, B. R. and J. B. MOYLE
1963. Populations of Plankton Animals and Residual Chlorinated Hydrocarbons in Soils of Six Minnesota Ponds Treated for Control of Mosquito Larvae. Transactions of the American Fisheries Society, vol. 92, No. 3, pp. 211–215.

KATZ, M.
1961. Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback. Transactions of the American Fisheries Society, vol. 90, No. 3, pp. 264–268.

KATZ, M. and G. G. CHADWICK
1961. Toxicity of Endrin to Some Pacific Northwest Fishes. Transactions of the American Fisheries Society, vol. 90, No. 4, pp. 394–397.

LACKEY, J. B. and M. L. STEINLE
1945. Effects of DDT Upon Some Aquatic Organisms, Other than Insect Larvae. Public Health Reports, No. 7, from Supplement No. 186, pp. 3–12.

LAWRENCE, J. M.
1950. Toxicity of Some New Insecticides to Several Species of Pond Fish. Progressive Fish Culturist, vol. 12, No. 3, pp. 141–146.

MACK, G. L.
1964. The DDT Content of Some Fishes and Surface Waters of New York State. New York Fish and Game Journal, vol. 11, No. 2, pp. 148–153.

MOUNT, D. I.

1962. Chronic Effects of Endrin on Bluntrose Minnows and Guppies. U. S. Fish and Wildlife Service, Research Report No. 8, pp. 1–38.

MOYE, W. C. and W. H. LUCKMANN

1964. Fluctuations in Populations of Certain Aquatic Insects Following Application of Aldrin in Granules to Sugar Creek, Iroquois County, Illinois. Journal of Economic Entomology, vol. 57, No. 3, pp. 318–322.

MULLA, M. S.

1960. Some Factors Regulating the Effectiveness of Granular Insecticides in Mosquito Control. Mosquito News, vol. 20, No. 9, pp. 262–267.

MULLA, M. S., L. W. ISAAK and H. AXELROD

1963. Field Studies on the Effects of Insecticides on Some Aquatic Wildlife Species. Journal of Economic Entomology, vol. 56, No. 2, pp. 184–188.

MUNCY, R. J. and A. D. OLIVER, JR.

1963. Toxicity of Ten Insecticides to the Red Crawfish, *Procambarus clarki* (Girard). Transactions of the American Fisheries Society, vol. 92, No. 4, pp. 428–431.

NICHOLSON, H. P.

1959. Insecticide Pollution of Water Resources. Journal of the American Water Works Association, vol. 51, No. 8, pp. 981–986.

PARKHURST, Z. E. and H. E. JOHNSON

1955. Toxicity of Malathion 500 to Fall Chinook Salmon Fingerlings. Progressive Fish Culturist, vol. 17, No. 3, pp. 113–116.

PICKERING, Q. H., C. HENDERSON and A. E. LEMKE

1962. The Toxicity of Organic Phosphorus Insecticides to Different Species of Warmwater Fishes. Transactions of the American Fisheries Society, vol. 91, No. 2, pp. 175–184.

PREMDAS, F. H. and J. M. ANDERSON

1963. The Uptake and Detoxication of C^{14}-labelled DDT in Atlantic Salmon, *Salmo salar*. Journal of the Fisheries Research Board of Canada, vol. 20, No. 3, pp. 827–837.

RUDD, R. L. and R. E. GENELLY

1956. Pesticides: Their Use and Toxicity in Relation to Wildlife. State of California, Department of Fish and Game, Game Management Branch, Game Bulletin No. 7, pp. 1–209.

SCHOENTHAL, N. D.

1963. Some Effects of DDT on Cold-Water Fish and Fish-Food Organisms. Proceedings of the Montana Academy of Sciences, vol. 23, pp. 63–95.

TARZWELL, C. M.

1950. Effects of DDT Mosquito Larviciding on Wildlife. V. Effects on Fishes of the Routine Manual and Airplane Application of DDT and Other Mosquito Larvicides. Public Health Reports, vol. 65, No. 8, pp. 231–255.

TARZWELL, C. M. and C. HENDERSON

1957. Toxicity of Dieldrin to Fish. Transactions of the American Fisheries Society, vol. 86, pp. 245–257.

WEBB, F. E.

1960. Aerial Forest Spraying in Canada in Relation to Effects on Aquatic Life. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Technical Report W60-3, pp. 66–70.

WEISS, C. M.

1959. Response of Fish to Sub-Lethal Exposures of Organic Phosphorus Insecticides. Sewage and Industrial Wastes, vol. 31, No. 5, pp. 580–593.

WEISS, C. M.

1961. Physiological Effect of Organic Phosphorus Insecticides on Several Species of Fish. Transactions of the American Fisheries Society, vol. 90, No. 2, pp. 143–152.

WEISS, C. M. and J. H. GAKSTATTER

1964. Detection of Pesticides in Water by Biochemical Assay. Journal of the Water Pollution Control Federation, vol. 36, No. 2, pp. 240–253.

WELCH, E. B. and J. C. SPINDLER

1964. DDT Persistence and Its Effect on Aquatic Insects and Fish After an Aerial Application. Journal of the Water Pollution Control Federation, vol. 36, No. 10, pp. 1285–1292.

YOUNG, L. A. and H. P. NICHOLSON

1951. Stream Pollution Resulting from the Use of Organic Insecticides. Progressive Fish Culturist, vol. 13, No. 4, pp. 193–198.

ENVIRONMENT CHANGE AND ITS EFFECT UPON AQUATIC LIFE

ALDERDICE, D. F., W. P. WICKETT and J. R. BRETT

1958. Some Effects of Temporary Exposure to Low Dissolved Oxygen Levels on Pacific Salmon Eggs. Journal of the Fisheries Research Board of Canada, vol. 15, No. 2, pp. 229–249.

BASU, S. P.

1959. Active Respiration of Fish in Relation to Ambient Concentrations of Oxygen and Carbon Dioxide. Journal of the Fisheries Research Board of Canada, vol. 16, No. 1, pp. 175–212.

BATES, J. M.

1962. The Impact of Impoundment on the Mussel Fauna of Kentucky Reservoir, Tennessee River. American Midland Naturalist, vol. 68, No. 1, pp. 232–236.

BEETON, A. M.

1961. Environmental Changes in Lake Erie. Transactions of the American Fisheries Society, vol. 90, No. 2, pp. 153–159.

BLACK, E. C., F. E. J. FRY and V. BLACK

1954. The Influence of Carbon Dioxide on the Utilization of Oxygen by Some Fresh-Water Fish. Canadian Journal of Zoology, vol. 32, pp. 408–420.

BRETT, J. R.

1952. Temperature Tolerance in Young Pacific Salmon, Genus *Oncorhynchus*. Journal of the Fisheries Research Board of Canada, vol. 9, No. 6, pp. 265–321.

BRIGGS, J. C.

1948. The Quantitative Effects of a Dam Upon the Bottom Fauna of a Small California Stream. Transactions of the American Fisheries Society, vol. 78, pp. 70–81.

BURDICK, G. E., M. LIPSCHUETZ, H. J. DEAN and E. J. HARRIS

1954. Lethal Oxygen Concentrations for Trout and Smallmouth Bass. New York Fish and Game Journal, vol. 1, No. 1, pp. 84–97.

BURDICK, G. E., H. J. DEAN and E. J. HARRIS

1957. Lethal Oxygen Concentrations for Yellow Perch. New York Fish and Game Journal, vol. 4, No. 1, pp. 92–101.

CAIRNS, J., JR.

1956. Effects of Heat on Fish. Industrial Wastes, vol. 1, No. 5, pp. 180–183.

CAIRNS, J., JR.

1956. Effects of Increased Temperatures on Aquatic Organisms. Industrial Wastes, vol. 1, No. 4, pp. 150–152.

CLAUSEN, R. G.

1933. Fish Metabolism Under Increasing Temperature. Transactions of the American Fisheries Society, vol. 63, pp. 215–219.

CLAUSEN, R. G.

1936. Oxygen Consumption in Fresh Water Fishes. Ecology, vol. 17, No. 2, pp. 216–226.

COOPER, A. L.

1960. Lethal Oxygen Concentration for the Northern Common Shiner. New York Fish and Game Journal, vol. 7, pp. 72–76.

COOPER, G. P. and G. N. WASHBURN

1946. Relation of Dissolved Oxygen to Winter Mortality of Fish in Michigan Lakes. Transactions of the American Fisheries Society, vol. 76, pp. 23–33.

CORDONE, A. J. and D. W. KELLEY

1961. The Influence of Inorganic Sediment on the Aquatic Life of Streams. California Fish and Game, vol. 47, No. 2, pp. 189–228.

DAVISON, R. C., W. P. BREESE, C. E. WARREN and P. DOUDOROFF

1959. Experiments on the Dissolved Oxygen Requirements of Cold-Water Fishes. Sewage and Industrial Wastes, vol. 31, No. 8, pp. 950–966.

DENDY, J. S. and R. H. STROUD

1949. The Dominating Influence of Fontana Reservoir on Temperature and Dissolved Oxygen in the Little Tennessee River and Its Impoundments. Journal of the Tennessee Academy of Science, vol. 24, No. 1, pp. 41–51.

DRYER, W. and N. G. BENSON
1957. Observations on the Influence of the New Johnsonville Steam Plant on Fish and Plankton Populations. Proceedings of the 10th Annual Conference of the Southern Association of Game and Fish Commissioners, pp. 85–91.

ELLIS, M. M.
1936. Erosion Silt as a Factor in Aquatic Environments. Ecology, vol. 17, No. 1, pp. 29–42.

ELLIS, M. M.
1942. Fresh-Water Impoundments. Transactions of the American Fisheries Society, vol. 71, pp. 80–93.

FRY, F. E. J.
1957. The Aquatic Respiration of Fish. In: Brown, M. E. (ed.), The Physiology of Fishes, vol. 1. Metabolism. Academic Press, New York, pp. 1–63.

GARDINER, A. J. and G. KING
1922. Respiration Exchange in Fresh Water Fish. Biochemical Journal, vol. 16, pp. 729–735.

GIBSON, E. S. and F. E. J. FRY
1954. The Performance of the Lake Trout, *Salvelinus namaycush* at Various Levels of Temperature and Oxygen Pressure. Canadian Journal of Zoology, vol. 32, pp. 252–260.

GREENBANK, J.
1945. Limnological Conditions in Ice-Covered Lakes, Especially as Related to Winter Kill in Fish. Ecological Monographs, vol. 15, No. 4, pp. 343–392.

HEATH, W. A.
1958. Cetyl Alcohol for Evaporation Control. Water and Sewage Works, vol. 105, No. 9, pp. 361–362.

JOB, S. V.
1955. The Oxygen Consumption of *Salvelinus fontinalis*. University of Toronto Biological Series, University of Toronto Press, vol. 61, pp. 1–39.

JONES, J. R. E.
1952. The Reaction of Fish to Water of Low Oxygen Concentrations. Journal of Experimental Biology, vol. 29, pp. 403–415.

KATZ, M., A. PRITCHARD and C. E. WARREN
1959. Ability of Some Salmonids and a Centrarchid to Swim in Water of Reduced Oxygen Content. Transactions of the American Fisheries Society, vol. 88, No. 4, pp. 88-95.

LABERGE, R. H.
1959. A Critical Problem in Stream Pollution Comes from Thermal Discharges. Water and Sewage Works, vol. 106, No. 12, pp. 536–540.

LARIMORE, R. W., W. C. CHILDERS and C. HECKROTTE
1959. Destruction and Re-establishment of Stream Fish and Invertebrates Affected by Drought. Transactions of the American Fisheries Society, vol. 88, pp. 261–285.

LARIMORE, R. W. and P. W. SMITH
1963. The Fishes of Champaign County, Illinois, as Affected by 60 Years of Stream Changes. Illinois Natural History Survey Bulletin, vol. 28, No. 2, pp. 299–375.

MOSS, D. D. and D. S. SCOTT
1961. Dissolved-Oxygen Requirements of Three Species of Fish. Transactions of the American Fisheries Society, vol. 90, No. 4, pp. 377–393.

NEEL, J. K. and W. R. ALLEN
1963. The Mussel Fauna of the Upper Cumberland Basin before Its Impoundment. Malacologia, vol. 1, No. 3, pp. 427–459.

RICHARDSON, R. E.
1925. Changes in the Small Bottom Fauna of Peoria Lake, 1920–1922. Illinois Natural History Survey Bulletin, vol. 15, No. 5, pp. 327–388.

SHAW, P. A. and J. A. MAGA
1943. The Effect of Mining Silt on Yield of Fry from Salmon Spawning Beds. California Fish and Game, vol. 9, No. 1, pp. 29–41.

SHEPARD, M. P.
1955. Resistance and Tolerance of Young Speckled Trout *(Salvelinus fontinalis)* to Oxygen Lack, with Special Reference to Low Oxygen Acclimation. Journal of the Fisheries Research Board of Canada, vol. 12, No. 3, pp. 387–446.

SILVEY, J. K. G.

1960. Physical, Chemical, and Biologic Effects of Hexadecanol on Lake Hefner, 1958. Journal of the American Water Works Association, vol. 52, No. 6, pp. 791–802.

SMITH, O. R.

1939. Placer Mining Silt and Its Relation to Salmon and Trout on the Pacific Coast. Transactions of the American Fisheries Society, vol. 69, pp. 225–230.

TAYLOR, C. C.

1951. A Survey of Former Shad Streams in Maine. U. S. Fish and Wildlife Service, Special Scientific Report No. 66, pp. 1–29.

TEBO, L. B., JR.

1955. Effects of Siltation, Resulting from Improper Logging on the Bottom Fauna of a Small Trout Stream in the Southern Appalachians. Progressive Fish Culturist, vol. 17, No. 2, pp. 64–70.

VAN OOSTEN, J.

1948. Turbidity as a Factor in the Decline of Great Lakes Fishes with Special Reference to Lake Erie. Transactions of the American Fisheries Society, vol. 75, pp. 281–322.

VAN VLIET, R.

1958. Effect of Heated Condenser Discharge upon Aquatic Life. The American Society of Mechanical Engineers, Paper No. 57-PWR-4, pp. 1–10.

WALLEN, I. E.

1951. The Direct Effect of Turbidity on Fishes. Bulletin of the Oklahoma Agricultural and Mechanical College, vol. 48, No. 2, pp. 1–27.

WALLEN, I. E., W. C. GREER and R. LASATER

1957. Toxicity to *Gambusia affinis* of Certain Pure Chemicals in Turbid Waters. Sewage and Industrial Wastes, vol. 29, No. 6, pp. 695–711.

WARD, H. B.

1938. Placer Mining and the Anadromous Fish of the Rogue River. Science, vol. 88, pp. 441–443.

WATERS, T. F.

1964. Recolonization of Denuded Stream Bottom Areas by Drift. Transactions of the American Fisheries Society, vol. 93, No. 3, pp. 311–315.

WHITMORE, C. M., C. E. WARREN and P. DOUDOROFF

1960. Avoidance Reactions of Salmonid and Centrarchid Fishes to Low Oxygen Concentrations. Transactions of the American Fisheries Society, vol. 89, No. 1, pp. 17–26.

WIEBE, A. H.

1933. The Effect of High Concentrations of Dissolved Oxygen on Several Species of Pond Fishes. Ohio Journal of Science, vol. 33, No. 2, pp. 110–126.

WOODBURY, L. A.

1942. A Sudden Mortality of Fishes Accompanying a Supersaturation of Oxygen in Lake Waubesa, Wisconsin. Transactions of the American Fisheries Society, vol. 71, pp. 112–117.

WURTZ, C. B. and T. DOLAN

1958. Comparative Stream Bottom Fauna Studies in the Pocono Mountains Relative to Floods. Proceedings of the Pennsylvania Academy of Sciences, vol. 32, pp. 229–232.

WURTZ, C. B. and T. DOLAN

1960. A Biological Method Used in the Evaluation of Effects of Thermal Discharge in the Schuylkill River. Proceedings of the 15th Industrial Waste Conference, Purdue University, Engineering Bulletin, vol. 45, No. 2, pp. 461–472.

RADIOACTIVITY AND ITS EFFECT UPON AQUATIC LIFE

CURRY, L. L.

1960. Midge Larvae as Indicators of Radioactive Pollution. Proceedings of the 15th Industrial Waste Conference, Purdue University, Engineering Bulletin, vol. 45, No. 2, pp. 269–280.

DAVIS, J. J. and R. F. FOSTER

1958. Bioaccumulation of Radioisotopes Through Aquatic Food Chains. Ecology, vol. 39, No. 7, pp. 530–535.

DAVIS, J. J.

1965. Accumulation of Radionuclides by Aquatic Insects. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 211-215.

Foster, R. F. and R. E. Rostenbach
1954. Distribution of Radioisotopes in Columbia River. Journal of the American Water Works Association, vol. 46, No. 7, pp. 633-640.

Foster, R. F.
1959. The Need for Biological Monitoring of Radioactive Waste Streams. Sewage and Industrial Wastes, vol. 31, No. 12, pp. 1409-1415.

Foster, R. W. and D. McConnon
1965. Relationships Between the Concentration of Radionuclides in Columbia River Water and Fish. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 216-224.

Harris, E. K.
1959. Estimating the Uptake of Radioactivity in Streams. Sewage and Industrial Wastes, vol. 31, No. 6, pp. 719-728.

Henderson, C., G. G. Robeck and R. C. Palange
1956. Effects of Low-Level Radioactivity in the Columbia River. Public Health Reports, vol. 71, No. 1, pp. 6-14.

Hooper, F. F., H. A. Podoliak and S. F. Snieszko
1961. Use of Radioisotopes in Hydrobiology and Fish Culture. Transactions of the American Fisheries Society, vol. 90, No. 1, pp. 49-57.

Likens, G. E. and A. D. Hasler
1960. Movement of Radiosodium in a Chemically Stratified Lake. Science, vol. 131, pp. 1676-1677.

Nelson, D. J.
1962. Clams as Indicators of Strontium-90. Science, vol. 137, pp. 38-39.

Palange, R. C., G. G. Robeck and C. Henderson
1956. Radioactivity in Stream Pollution. Industrial and Engineering Chemistry, vol. 48, No. 10, pp. 1847-1850.

Steel, E. W. and E. F. Gloyna
1955. Concentration of Radioactivity in Oxidation Ponds. Sewage and Industrial Wastes, vol. 27, No. 8, pp. 941-956.

Tsivoglou, E. C., E. D. Harward and W. M. Ingram
1957. Stream Surveys for Radioactive Waste Control. American Society of Mechanical Engineers, New York; Paper No. 57-NESC-21, Second Nuclear Engineering and Science Conference, Philadelphia, Pennsylvania, pp. 1-12.

Tsivoglou, E. C., A. F. Bartsch, D. E. Rushing and D. A. Holaday
1958. Effects of Uranium Ore Refinery Wastes on Receiving Waters. Sewage and Industrial Wastes, vol. 30, No. 8, pp. 1012-1027.

Watson, D. G. and J. J. Davis
1957. Concentration of Radioisotopes in Columbia River Whitefish in the Vicinity of the Hanford Atomic Products Operation. HW-48523 (Del.), pp. 1-133.

TOXICITY AND BIO-ASSAY METHODS

Alderdice, D. F.
1963. Some Effects of Simultaneous Variation in Salinity, Temperature and Dissolved Oxygen on the Resistance of Young Coho Salmon to a Toxic Substance. Journal of the Fisheries Research Board of Canada, vol. 20, No. 2, pp. 525-550.

Anderson, B. G.
1944. The Toxicity Thresholds of Various Substances Found in Industrial Wastes as Determined by the Use of *Daphnia magna*. Sewage Works Journal, vol. 16, No. 6, pp. 1156-1165.

Anderson, B. G.
1948. The Apparent Thresholds of Toxicity to *Daphnia magna* for Chlorides of Various Metals when Added to Lake Erie Water. Transactions of the American Fisheries Society, vol. 78, pp. 96-113.

Angelovic, J. W., W. F. Sigler and J. M. Neuhold
1961. Temperature and Fluorosis in

Rainbow Trout. Sewage and Industrial Wastes, vol. 33, No. 4, pp. 371–381.

APPLEGATE, V. C., J. H. **HOWELL** and A. E. **HALL**, JR.
1957. Toxicity of 4,346 Chemicals to Larval Lampreys and Fishes. U. S. Department of the Interior, Special Scientific Report, Fisheries No. 207, pp. 1–157.

APPLEGATE, V. C. and E. L. **KING**, JR.
1962. Comparative Toxicity of 3-Trifluormethyl-4-Nitrophenol (TFM) to Larval Lampreys and Eleven Species of Fishes. Transactions of the American Fisheries Society, vol. 91, No. 4, pp. 342–345.

AUDUS, L. J.
1964. The Physiology and Biochemistry of Herbicides. Academic Press, Incorporated, New York, pp. 1–555.

BURDICK, G. E., M. **LIPSCHUETZ**, H. J. **DEAN** and E. J. **HARRIS**
1954. Lethal Oxygen Concentrations for Trout and Smallmouth Bass. New York Fish and Game Journal, vol. 1, No. 1, pp. 84–97.

BURDICK, G. E., H. J. **DEAN** and E. J. **HARRIS**
1955. Toxicity of Emulsifiable Rotenone to Various Species of Fish. New York Fish and Game Journal, vol. 2, No. 1, pp. 36–67.

BURDICK, G. E., H. J. **DEAN** and E. J. **HARRIS**
1957. Lethal Oxygen Concentrations for Yellow Perch. New York Fish and Game Journal, vol. 4, No. 1, pp. 92–101.

BURDICK, G. E.
1957. A Graphical Method for Deriving Threshold Values of Toxicity and the Equation of the Toxicity Curve. New York Fish and Game Journal, vol. 4, No. 1, pp. 102–108.

BURDICK, G. E., H. J. **DEAN** and E. J. **HARRIS**
1958. Toxicity of Cyanide to Brown Trout and Smallmouth Bass. New York Fish and Game Journal, vol. 5, No. 2, pp. 133–163.

BURDICK, G. E., H. J. **DEAN** and E. J. **HARRIS**
1964. Toxicity of Aqualin to Fingerling Brown Trout and Bluegills. New York Fish and Game Journal, vol. 11, No. 1, pp. 106–114.

CAIRNS, J., JR. and A. **SCHEIER**
1958. The Relationship of Bluegill Sunfish Body Size to Tolerance for Some Common Chemicals. Proceedings of the 13th Industrial Waste Conference, Purdue University, Engineering Bulletin, vol. 43, No. 3, pp. 243–252.

CAIRNS, J., JR. and A. **SCHEIER**
1963. Environmental Effects upon Cyanide Toxicity to Fish. Notulae Naturae of the Philadelphia Academy of Natural Sciences, No. 361, pp. 1–11.

CAIRNS, J., JR., A. **SCHEIER** and N. E. **HESS**
1964. The Effects of Alkyl Benzene Sulfonate on Aquatic Organisms. Industrial Water and Wastes, vol. 9, No. 1, pp. 22–28.

CAIRNS, J., JR. and A. **SCHEIER**
1964. The Effects of Sublethal Levels of Zinc and of High Temperature Upon the Toxicity of a Detergent to the Sunfish *Lepomis Gibbosus* (Linn.). Notulae Naturae of the Philadelphia Academy of Natural Sciences, No. 367, pp. 1–3.

CHANIN, G. and R. P. **DEMPSTER**
1958. A Complex Chemical Waste and Its Toxicity to Fish. Industrial Wastes, vol. 3, No. 6, pp. 155–158.

CLEMENS, H. P. and W. H. **JONES**
1954. Toxicity of Brine Water from Oil Wells. Transactions of the American Fisheries Society, vol. 84, pp. 97–109.

COLE, A. E.
1935. Water Pollution Studies in Wisconsin. Effects of Industrial (Pulp and Paper Mill) Wastes on Fish. Sewage Works Journal, vol. 7, No. 2, pp. 280–302.

CRANDALL, C. A. and C. J. **GOODNIGHT**
1959. The Effect of Various Factors on the Toxicity of Sodium Pentachlorophenate to Fish. Limnology and Oceanography, vol. 4, No. 1, pp. 53–56.

DOOLEY, T. P. and J. **CAVIL**
1964. Minimum Lethal Concentration of 15 Common Detergents on the Mosquito Minnow *(Gambusia affinis)*. Texas Journal of Science, vol. 16, No. 2, pp. 202–209.

DOUDOROFF, P. and M. KATZ

1950. Critical Review of Literature on the Toxicity of Industrial Wastes and Their Components to Fish: I. Alkalies, Acids and Inorganic Gases. Sewage and Industrial Wastes, vol. 22, No. 11, pp. 1432–1458.

DOUDOROFF, P.

1951. Biological Observations and Toxicity Bioassays in the Control of Industrial Waste Disposal. Proceedings of the Sixth Industrial Waste Conference, Purdue University, pp. 88–108.

DOUDOROFF, P., B. G. ANDERSON, G. E. BURDICK, et al.

1951. Bio-Assay Methods for the Evaluation of Acute Toxicity of Industrial Wastes to Fish. Sewage and Industrial Wastes, vol. 23, No. 11, pp. 1380–1397.

DOUDOROFF, P. and M. KATZ

1953. Critical Review of Literature on the Toxicity of Industrial Wastes and Their Components to Fish. II. The Metals, as Salts. Sewage and Industrial Wastes, vol. 25, No. 7, pp. 802–839.

DOUDOROFF, P., M. KATZ and C. M. TARZWELL

1953. Toxicity of Some Organic Insecticides to Fish. Sewage and Industrial Wastes, vol. 25, No. 7, pp. 840–844.

DOUDOROFF, P.

1956. Some Experiments on the Toxicity of Complex Cyanides to Fish. Sewage and Industrial Wastes, vol. 28, No. 8, pp. 1020–1040.

DOWDEN, B. F.

1962. Toxicity of Commercial Waste-Oil Emulsifiers to *Daphnia magna*. Journal of the Water Pollution Control Federation, vol. 34, No. 10, pp. 1010–1014.

DOWNING, K. M. and J. C. MERKENS

1955. The Influence of Dissolved-Oxygen Concentrations on the Toxicity of Un-ionized Ammonia to Rainbow Trout *(Salmo gairdnerii* Richardson). Annals of Applied Biology, vol. 43, No. 2, pp. 243–246.

ELLIS, M. M.

1937. Detection and Measurement of Stream Pollution. U. S. Bureau of Fisheries, Bulletin No. 22, pp. 365–437.

ELLIS, M. M., B. A. WESTFALL and M. D. ELLIS

1946. Determination of Water Quality. U. S. Fish and Wildlife Service, Research Report No. 9, pp. 1–122.

FREEMAN, L.

1953. A Standardized Method for Determining Toxicity for Pure Compounds to Fish. Sewage and Industrial Wastes, vol. 25, No. 7, pp. 845–848.

FREEMAN, L and I. FOWLER

1953. Toxicity of Combinations of Certain Inorganic Compounds to *Daphnia magna* Straus. Sewage and Industrial Wastes, vol. 25, No. 10, pp. 1191–1195.

FROMM, P. O. and R. H. SCHIFFMAN

1958. Toxic Action of Hexavalent Chromium on Largemouth Bass. Journal of Wildlife Management, vol. 22, No. 1, pp. 40–44.

FROMM, P. O. and R. M. STOKES

1962. Assimilation and Metalobism of Chromium by Trout. Journal of the Water Pollution Control Federation, vol. 34, No. 11, pp. 1151–1155.

GAUFIN, A. R., L. JENSEN and T. NELSON

1961. Bio-assays Determine Pesticide Toxicity to Aquatic Invertebrates. Water and Sewage Works, vol. 108, No. 9, pp. 355–359.

GILLETTE, L. A., D. L. MILLER and H. E. REDMAN

1952. Appraisal of a Chemical Waste Problem by Fish Toxicity Tests. Sewage and Industrial Wastes, vol. 24, No. 11, pp. 1397–1401.

GOLDMAN, C. R. and R. C. CARTER

1965. An Investigation by Rapid Carbon-14 Bioassay of Factors Affecting the Cultural Eutrophication of Lake Tahoe, California. Journal of the Water Pollution Control Federation, vol. 37, No. 7, pp. 1044–1059.

GRENIER, F.

1960. A Constant Flow Apparatus for Toxicity Experiments on Fish. Sewage and Industrial Wastes, vol. 32, No. 10, pp. 1117–1119.

HARP, G. L. and R. S. CAMPBELL

1964. Effects of the Herbicide Silvex on Benthos of a Farm Pond. Journal of Wildlife Management, vol. 28, No. 2, pp. 308–317.

HARRY, H. W. and J. B. SENTURIA

1964. The Effect of Nitrogen, Oxygen and Carbon Dioxide in Producing the Distress Syndrome in *Taphus glabratus* (Gastropoda, Pulmonata). Biological Bulletin, vol. 127, No. 2, pp. 271–279.

HART, W. B., R. F. WESTON and J. G. DEMANN

1945. An Apparatus for Oxygenating Test Solutions in which Fish are Used as Test Animals for Evaluating Toxicity. Transactions of the American Fisheries Society, vol. 75, pp. 228–236.

HAYDU, E. P., H. R. AMBERG and R. E. DIMICK

1953. The Lethality of Methyl Mercaptan to King Salmon as Influenced by Variation of the Volume of Test Solution. Technical Association of the Pulp and Paper Industry, vol. 36, No. 3, pp. 131–133.

HENDERSON, C. and Q. H. PICKERING

1957. Toxicity of Organic Phosphorus Insecticides to Fish. Transactions of the American Fisheries Society, vol. 87, pp. 39–51.

HENDERSON, C. and C. M. TARZWELL

1957. Bio-assays for Control of Industrial Effluents. Sewage and Industrial Wastes, vol. 29, No. 9, pp. 1002–1017.

HENDERSON, C.

1958. Bio-assay of Chemical Wastes Prevents Serious Fish Kills. Wastes Engineering, vol. 29, No. 9, pp. 482–484.

HENDERSON, C., Q. H. PICKERING and C. M. TARZWELL

1959. Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish. Transactions of the American Fisheries Society, vol. 88, No. 1, pp. 23–32.

HENDERSON, C., Q. H. PICKERING and J. M. COHEN

1959. The Toxicity of Synthetic Detergents and Soaps to Fish. Sewage and Industrial Wastes, vol. 31, No. 3, pp. 295–306.

HENDERSON, C., Q. H. PICKERING and A. E. LEMKE

1960. The Effect of Some Organic Cyanides (Nitriles) on Fish. Proceedings of the 15th Industrial Waste Conference, Purdue University, Engineering Bulletin, vol. 45, No. 2, pp. 120–130.

HERBERT, D. W. M. and D. S. SHURBEN

1964. The Toxicity to Fish of Mixtures of Poisons. I. Salts of Ammonia and Zinc. Annals of Applied Biology, vol. 53, No. 1, pp. 33–41.

HERBERT, D. W. M. and J. M. VANDYKE

1964. The Toxicity to Fish of Mixtures of Poisons. II. Copper-Ammonia and Zinc-Phenol Mixtures. Annals of Applied Biology, vol. 53, No. 3, pp. 415–421.

HOLLAND, G. A. (ed.)

1953. Toxic Effects of Sulfite Waste Liquor on Spring Salmon. State of Washington, Department of Fisheries Research Bulletin, No. 1, pp. 1–111.

HOWARD, T. E., H. N. HALVORSON and C. C. WALDEN

1964. Toxicity of Copper Compounds to the Snail Vector Hosts of the Agent of Schistosome Dermatitis in Waters of Differing Hardness. American Journal of Hygiene, vol. 79, No. 3, pp. 33–44.

HUGHES, J. S. and J. T. DAVIS

1963. Variations in Toxicity to Bluegill Sunfish of Phenoxy Herbicides. Weeds, vol. 11, No. 1, pp. 50–53.

KNOLL, J. and P. O. FROMM

1960. Accumulation and Elimination of Hexavalent Chromium in Rainbow Trout. Physiological Zoology, vol. 33, No. 1, pp. 1–8.

LAMMERING, M. W. and N. C. BURBANK

1960. The Toxicity of Phenol, O-Chlorophenol, and O-Nitrophenol to Bluegill Sunfish. Proceedings of the 15th Industrial Waste Conference, Purdue University, Engineering Bulletin, vol. 45, No. 2, pp. 541–555.

LAWRENCE, J. M.

1962. Aquatic Herbicide Data. U. S. Department of Agriculture, Research Service, Handbook No. 231, pp. 1–133.

LEMKE, A. E. and D. I. MOUNT

1963. Some Effects of Alkyl Benzene Sulfonate on the Bluegill *Lepomis macrochirus*. Transactions of the American Fisheries Society, vol. 92, No. 4, pp. 372–378.

LEWIS, W. M. and C. PETERS

1956. Coal Mine Slag Drainage, Toxicity to Representative Fishes. Industrial Wastes, vol. 1, No. 4, pp. 145–147.

LLOYD, R.

1961. The Toxicity of Ammonia to Rainbow Trout (*Salmo gairdnerii* Richardson). The Water and Waste Treatment Journal, vol. 8, No. 6, pp. 278–279.

McDONALD, S.

1962. Rapid Detection of Chlorinated Hydrocarbon Insecticides in Aqueous Suspension with *Gammarus lacustris lacustris* (Sars). Canadian Journal of Zoology, vol. 40, pp. 719–723.

McKEE, J. E. and H. W. WOLF

1963. Water Quality Criteria, 2nd Edition. The Resources Agency of California. State Water Quality Board, Publication No. 3–A, 1-548. pp.

MOUNT, D. I.

1964. An Autopsy Technique for Zinc-Caused Fish Mortality. Transactions of the American Fisheries Society, vol. 93, No. 2, pp. 174–182.

PARKHURST, Z. E. and H. E. JOHNSON

1955. Toxicity of Malathion 500 to Fall Chinook Salmon Fingerlings. Progressive Fish Culturist, vol. 17, No. 3, pp. 113–116.

PATTERSON, R. S. and D. L. VON WINDEGUTH

1964. The Effects of Baytex on Some Aquatic Organisms. Mosquito News, vol. 24, No. 1, pp. 46-49.

SAILA, S. B.

1953. Bio-assay Procedures for the Evaluation of Fish Toxicities with Particular Reference to Rotenone. Transactions of the American Fisheries Society, vol. 83, pp. 104–114.

SKULBERG, O.

1964. Algal Problems Related to the Eutrophication of European Water Supplies, and a Bio-Assay Method to Assess Fertilizing Influences of Pollution on Inland Waters. In: Algae and Man, Plenum Press, New York, pp. 262–299.

SNOW, J. R.

1963. Simazine as an Algicide for Bass Ponds. Progressive Fish Culturist, vol. 25, No. 1, pp. 34–36.

SPRAGUE, J. B.

1964. Avoidance of Copper-Zinc Solutions by Young Salmon in the Laboratory. Journal of the Water Pollution Control Federation, vol. 36, No. 8, pp. 990–1004.

SPRAGUE, J. B. and B. A. RAMSAY

1965. Lethal Levels of Mixed Copper-Zinc Solutions for Juvenile Salmon. Journal of the Fisheries Research Board of Canada, vol. 22, No. 2, pp. 425–432.

SPRINGER, P. F.

1957. Effects of Herbicides and Fungicides on Wildlife. North Carolina Pesticide Manual. North Carolina State College, Raleigh, North Carolina, pp. 87–106.

SPROUL, O. J. and D. W. RYCKMAN

1963. Significant Physiological Characteristics of Organic Pollutants. Journal of the Water Pollution Control Federation, vol. 35, No. 9, pp. 1136–1145.

ST. AMANT, J. A., W. C. JOHNSON and M. J. WHALLS

1964. Aqualin as a Fish Toxicant. Progressive Fish Culturist, vol. 26, No. 2, pp. 84–88.

SURBER, E. W. and Q. H. PICKERING

1962. Acute Toxicity of Endothal, Diquat, Hyamine, Dalapon, and Silvex to Fish. Progressive Fish Culturist, vol. 24, No. 4, pp. 164–171.

SURBER, E. W. and T. O. THATCHER

1963. Laboratory Studies of the Effects of Alkyl Benzene Sulfonate (ABS) on Aquatic Invertebrates. Transactions of the American Fisheries Society, vol. 92, No. 2, pp. 152–160.

TARZWELL, C. M.

1958. The Toxicity of Some Organic Insecticides to Fishes. Proceedings of the Twelfth Annual Conference of the Southeastern Association of Game and Fish Commissioners, pp. 233–239.

TRAMA, F. B. and R. J. BENOIT

1960. Toxicity of Hexavalent Chromium to Bluegills. Sewage and Industrial Wastes, vol. 32, No. 8, pp. 868–877.

WALKER, C. R.

1963. Endothal Derivatives as Aquatic Herbicides in Fishery Habitats. Weeds, vol. 11, No. 3, pp. 226–232.

WALKER, C. R.

1964. Toxicological Effects of Herbicides on the Fish Environment. Part I. Water and Sewage Works, vol. 111 No. 3, pp. 113–116.

WALKER, C. R.
1964. Toxicological Effects of Herbicides on the Fish Environment. Part II. Water and Sewage Works, vol. 111, No. 4, pp. 173–175.

WALLEN, I. E., W. C. GREER and R. LASATER
1957. Toxicity to *Gambusia affinis* of Certain Pure Chemicals in Turbid Waters. Sewage and Industrial Wastes, vol. 29, No. 6, pp. 695–711.

WEISS, C. M.
1955. A Constant Temperature Tank for Fish Bioassay Aquaria. Sewage and Industrial Wastes, vol. 27, No. 12, pp. 1399–1401.

WEISS, C. M. and J. L. BOTTS
1957. Factors Affecting the Response of Fish to Toxic Materials. Sewage and Industrial Wastes, vol. 29, No. 7, pp. 810–818.

WEISS, C. M. and J. H. GAKSTATTER
1964. Detection of Pesticides in Water by Biochemical Assay. Journal of the Water Pollution Control Federation, vol. 36, No. 2, pp. 240–253.

TECHNIQUES

ANDERSON, R. O.
1959. A Modified Flotation Technique for Sorting Bottom Fauna Samples. Limnology and Oceanography, vol. 4, No. 2, pp. 223–225.

BAYLESS, J. R. and H. H. GERSTEIN
1929. Micro-Organisms in the Lake Michigan Water at Chicago, Their Effect on Filtration and Method for Counting. Municipal News and Water Works, vol. 76, pp. 291–296.

BICK, H.
1963. A Review of Central European Methods for the Biological Estimation of Water Pollution Levels. Bulletin of the World Health Organization, No. 29, pp. 401–413.

CHANG, S. L.
1960. Proposed Method for Examination of Water for Free-Living Nematodes. Journal of the American Water Works Association, vol. 52, No. 6, pp. 695–698.

CLARK, W. J. and W. E. SIGLER
1963. Method of Concentrating Phytoplankton Samples Using Membrane Filters. Limnology and Oceanography, vol. 8, No. 1, pp. 127–129.

COLLIER, A. and S. M. RAY
1948. An Automatic Proportioning Apparatus for Experimental Study of the Effects of Chemical Solutions on Aquatic Animals. Science, vol. 107, pp. 576–577.

COPE, O. B.
1960. Collection and Preservation of Fish and Other Materials Exposed to Pesticides. Progressive Fish Culturist, vol. 22, No. 3, pp.103–108.

COWELL, B. C.
1960. A Quantitative Study of the Winter Plankton of Urschel's Quarry. The Ohio Journal of Science, vol. 60, No. 3, pp. 183–191.

CUMMINS, K. W.
1962. An Evaluation of Some Techniques for the Collection and Analysis of Benthic Samples with Special Emphasis on Lotic Waters. American Midland Naturalist, vol. 67, No. 2, pp. 477–504.

DAMANN, K. E.
1950. A Simplified Plankton Counting Method. Transactions of the Illinois Academy of Sciences, vol. 43, pp. 53–60.

EDMUNDS, G. F.
1963. A Method for Obtaining Interstitial Water from Shallow Aquatic Substrates and Determining the Oxygen Concentration. Ecology, vol. 44, No. 1, pp. 191–193.

FJERDINGSTAD, E.
1965. Some Remarks on a New Saprobic System. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 232–235.

FREMLING, C. R. and J. J. EVANS
1963. A Method for Determining the

Dissolved-Oxygen Concentration near the Mud-Water Interface. Limnology and Oceanography, vol. 8, No. 3, pp. 363–364.

GRENIER, F.
1960. A Constant Flow Apparatus for Toxicity Experiments on Fish. Sewage and Industrial Wastes, vol. 32, No. 10, pp. 1117–1119.

GRZENDA, A. R. and M. L. BREHMER
1960. A Quantitative Method for the Collection and Measurement of Stream Periphyton. Limnology and Oceanography, vol. 5, No. 2, pp. 190–194.

GUYER, G. and R. HUTSON
1955. A Comparison of Sampling Techniques Utilized in an Ecological Study of Aquatic Insects. Journal of Economic Entomology, vol. 48, No. 6, pp. 662–665.

HENDERSON, C. and Q. H. PICKERING
1963. Use of Fish in the Detection of Contaminants in Water Supplies. Journal of the American Water Works Association, vol. 55, No. 6, pp. 715–720.

HOOPER, F. F., H. A. PODOLIAK and S. F. SNIESZKO
1961. Use of Radioisotopes in Hydrobiology and Fish Culture. Transactions of the American Fisheries Society, vol. 90, No. 1, pp. 49–57.

INGRAM, W. M. and C. M. PALMER
1952. Simplified Procedures for Collecting, Examining, and Recording Plankton in Water. Journal of the American Water Works Association, vol. 44, No. 7, pp. 617–624.

JACKSON, H. W. and L. G. WILLIAMS
1962. Calibration and Use of Certain Plankton Counting Equipment. Transactions of the American Microscopical Society, vol. 81, No. 1, pp. 96–103.

KING, D. L. and R. C. BALL
1964. A Quantitative Biological Measure of Stream Pollution. Journal of the Water Pollution Control Federation, vol. 36, No. 5, pp. 650–653.

KOCH, L. F.
1957. Index of Biotic Dispersity. Ecology, vol. 38, Nos. 1 and 2, pp. 145–148.

KUTKUHN, J. H.
1958. Notes on the Precision of Numerical and Volumetric Plankton Estimates from Small-Sample Concentrates. Limnology and Oceanography, vol. 3, No. 1, pp. 69–83.

LACKEY, J. B.
1938. The Manipulation and Counting of River Plankton and Changes in Some Organisms Due to Formalin Preservation. Public Health Reports, vol. 53, No. 47, pp. 2080–2093.

LAMMERS, W. T.
1962. Density Gradient Separation of Plankton and Clay from River Water. Limnology and Oceanography, vol. 7, No. 2, pp. 224–229.

LANGELIER, W. F.
1928. The Quantitative Examination of Plankton. Journal of the American Water Works Association, vol. 19, No. 4, pp. 408–415.

LUND, J. W. G. and J. F. TALLING
1957. Botanical Limnological Methods with Special Reference to the Algae. Botanical Review, vol. 23, No. 849, pp. 489–583.

LUND, J. W. G.
1959. A Simple Counting Chamber for Nannoplankton. Limnology and Oceanography, vol. 4, No. 1, pp. 57–65.

MCKEOWN, J. J.
1963. The Control of *Sphaerotilus natans*. Part 1. Industrial Water and Wastes, vol. 8, No. 3, pp. 19–22.

MCKEOWN, J. J.
1963. The Control of *Sphaerotilus natans*. Part. 2. Intermittent Discharge of Strong Wastes. Industrial Water and Wastes, vol. 8, No. 4, pp. 30–33.

MCNABB, C. D.
1960. Enumeration of Freshwater Phytoplankton Concentrated on the Membrane Filter. Limnology and Oceanography, vol. 5, No. 1, pp. 57–61.

MOORE, E. W.
1952. The Precision of Microscopic Counts of Plankton in Water. Journal of the American Water Works Association, vol. 44, No. 3, pp. 208–216.

NORTHCOTE, T. G.
1964. Use of a High-Frequency Echo

Sounder to Record Distribution and Migration of *Chaoborus* Larvae. Limnology and Oceanography, vol. 9, No. 1, pp. 87–91.

OLSON, T. A.

1936. Microscopic Methods Used in Biological Investigations of Lake and Stream Pollution, and Interpretation of Results. Sewage Works Journal, vol. 8, No. 5, pp. 759–765.

PALMER, C. M. and T. E. MALONEY

1954. A New Counting Slide for Nannoplankton. American Society of Limnology and Oceanography, Publication No. 21, pp. 1–6.

PARSONS, T. R. and J. D. H. STRICKLAND

1963. Discussion of Spectrophotometric Determination of Marine-Plant Pigments, with Revised Equations for Ascertaining Chlorophylls and Carotenoids. Journal of Marine Research, vol. 21, No. 3, pp. 155–163.

PETERSON, A.

1953. A Manual of Entomological Techniques. Edwards Brothers, Inc., Ann Arbor, Michigan, 367 pp.

PRINGSHEIM, E. G.

1964. Pure Cultures of Algae. Hafner Publishing Company, New York, 119 pp.

PURDY, W. C.

1935. Algae and Their Enumeration. 15th Annual Ohio Conference on Water Purification, pp. 43–47.

RICHARDS, F. A. with T. G. THOMPSON

1952. The Estimation and Characterization of Plankton Populations by Pigment Analysis. II. A Spectrophotometric Method for the Estimation of Plankton Pigments. Journal of Marine Research, vol. 11, No. 2, pp. 156–175.

SLADECKOVA, A.

1962. Limnological Investigation Methods for the Periphyton (Aufwuchs) Community. Botanical Review, vol. 28, No. 2, pp. 286–350.

TUCKER, A.

1949. Pigment Extraction as a Method of Quantitative Analysis of Phytoplankton. Transactions of the American Microscopical Society, vol. 68, No. 1, pp. 21–23.

WILSON, J. N., R. A. WAGNER, G. L. TOOMBS and A. E. BECHER, JR.

1960. Methods for the Determination of Slimes in Rivers. Journal of the Water Pollution Control Federation, vol. 32, No. 1, pp. 83–89.

ZURBUCH, P. E.

1963. Dissolving Limestone from Revolving Drums in Flowing Water. Transactions of the American Fisheries Society, vol. 92, No. 2, pp. 173–177.

SAMPLERS

COOKE, W. B.

1956. Colonization of Artificial Bare Areas by Micro-organisms. The Botanical Review, vol. 22, No. 9, pp. 613–638.

GLEASON, G. R. and F. G. GOFF

1963. A Multi-Level Water Sampler. Progressive Fish Culturist, vol. 25, No. 2, pp. 104–105.

GRZENDA, A. R. and L. BREHMER

1960. A Quantitative Method for the Collection and Measurement of Stream Periphyton. Limnology and Oceanography, vol. 5, No. 6, pp. 190–194.

GUYER, G. and R. HUTSON

1955. A Comparison of Sampling Techniques Utilized in an Ecological Study of Aquatic Insects. Journal of Economic Entomology, vol. 48, No. 6, pp. 662–665.

HESTER, F. E. and J. S. DENDY

1962. A Multiple-Plate Sampler for Aquatic Macroinvertebrates. Transactions of the American Fisheries Society, vol. 91, No. 4, pp. 420–421.

MACINTYRE, R. J.

1964. A Box Dredge for Quantitative Sampling of Benthic Organisms. Limnology and Oceanography, vol. 9, No. 3, pp. 460–461.

NEEDHAM, P. R. and R. L. USINGER

1956. Variability in the Macrofauna of a Single Riffle in Prosser Creek, California, as Indicated by the Surber Sampler. Hilgardia, vol. 24, No. 14, pp. 383–409.

PATRICK, R., M. H. HOHN and J. H. WALLACE

1954. A New Method for Determining the Pattern of the Diatom Flora. Notulae Naturae, Academy of Natural Sciences of Philadelphia, No. 259, pp. 1–12.

Qadri, S. V.

1960. A Small Drag Net for Capture of Bottom Fish and Invertebrates. Progressive Fish Culturist, vol. 22, No. 2, pp. 90–91.

Sladeckova, A.

1962. Limnological Investigation Methods for the Periphyton (Aufwuchs) Community. Botanical Review, vol. 28, No. 2, pp. 286–350.

Thomas, M. L. H.

1960. A Modified Anchor Dredge for Collecting Burrowing Animals. Journal of the Fisheries Research Board of Canada, vol. 17, No. 4, pp. 591–594.

Tindall, D. R. and W. L. Minckley

1964. An Integrated Application of Three Kinds of Sampling Techniques to Stream Limnology. Limnology and Oceanography, vol. 9, No. 2, pp. 270–274.

Usinger, R. L. and P. R. Needham

1956. A Drag-Type Riffle-Bottom Sampler. Progressive Fish Culturist, vol. 18, No. 1, pp. 42–44.

Walker, C. R.

1955. A Core Sampler for Obtaining Samples of Bottom Muds. Progressive Fish Culturist, vol. 17, No. 3, p. 140.

CRITERIA FOR AQUATIC LIFE

Anon.

1955. Aquatic Life Water Criteria. First Progress Report, Aquatic Life Advisory Committee of the Ohio River Valley Water Sanitation Commission. Sewage and Industrial Wastes, vol. 27, No. 3, pp. 321–331.

Anon.

1956. Aquatic Life Water Criteria. Second Progress Report, Aquatic Life Advisory Committee of the Ohio River Valley Water Sanitation Commission. Sewage and Industrial Wastes, vol. 28, No. 5, pp. 678–690.

Anon.

1960. Aquatic Life Water Quality Criteria. Third Progress Report, Journal of the Water Pollution Control Federation, vol. 32, No. 1, pp. 65–82.

Bennett, G. W.

1965. The Environmental Requirements of Centrarchids with Special Reference to Largemouth Bass. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 156–159.

Bullard, W. E.

1965. Role of Watershed Management in the Maintenance of Suitable Environments for Aquatic Life. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 265–269.

Cairns, J., Jr.

1965. The Environmental Requirements of Fresh Water Protozoa. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 48–52.

Curry, L. L.

1965. A Survey of Environmental Requirements for the Midge (Diptera: Tendipedidae). In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 127–140.

Doudoroff, P. and C. E. Warren

1965. Dissolved Oxygen Requirements of Fishes. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 145–155.

Gaufin, A. R.

1965. Environmental Requirements of Plecoptera. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincin-

nati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 105–110.

HUET, M.
1965. Water Quality Criteria for Fish Life. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 160–167.

JACOBS, H. L., I. N. GABRIELSON, R. K. HORTON, W. A. LYON, E. C. HUBBARD and G. E. MCCALLUM
1965. Water Quality Criteria—Stream Vs. Effluent Standards. Journal of the Water Pollution Control Federation, vol. 37, No. 3, pp. 292–315.

LEONARD, J. W.
1965. Environmental Requirements of Ephemeroptera. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 110–117.

MCKEE, J. E. and H. W. WOLF
1963. Water Quality Criteria, 2nd Edition. The Resources Agency of California, State Water Quality Board, Publication No. 3-A, pp. 1–548.

ROBACK, S. S.
1965. Environmental Requirements of Trichoptera. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-25, pp. 118–126.

SILVER, S. J., C. E. WARREN and P. DOUDOROFF
1963. Dissolved Oxygen Requirements of Developing Steelhead Trout and Chinook Salmon Embryos at Different Water Velocities. Transactions of the American Fisheries Society, vol. 92, No. 4, pp. 327–343.

SINCLAIR, R. M.
1964. Water Quality Requirements for Elmid Beetles, with Larval and Adult Keys to the Eastern Genera. Tennessee Department of Public Health, pp. 1–14.

THOMPSON, D. H.
1925. Some Observations on the Oxygen Requirements of Fishes in the Illinois River. Illinois Natural History Survey, Bulletin 15, No. 7, pp. 423–437.

WHITWORTH, W. R. and W. H. IRWIN
1961. The Minimum Oxygen Requirements of Five Species of Fish under Quiescent Conditions. Proceedings of the 15th Annual Conference of the Southeastern Association of the Game and Fish Commissioners, pp. 226–235.

INDUSTRIAL WASTES

GENERAL REFERENCES

ANDERSON, B. G.
1944. The Toxicity Thresholds of Various Substances Found in Industrial Wastes as Determined by the Use of *Daphnia magna*. Sewage Works Journal, vol. 16, No. 6, pp. 1156–1165.

ANDERSON, B. G.
1948. The Apparent Thresholds of Toxicity to *Daphnia magna* for Chlorides of Various Metals when Added to Lake Erie Water. Transactions of the American Fisheries Society, vol. 78, pp. 96–113.

BEAK, T. W.
1959. Biological Survey of the St. Clair River. Industrial Wastes, vol. 4, No. 5, pp. 107–109.

CAWLEY, W. A.
1958. An Effect of Biological Imbalance in Streams. Sewage and Industrial Wastes, vol. 30, No. 9, pp. 1174–1182.

CHANIN, G. and P. DEMPSTER
1958. A Complex Chemical Waste and Its Toxicity to Fish. Industrial Wastes, vol. 3, No. 6, pp. 155–158.

COLE, V. W.
1957. Lime Treatment of Lake Reduces Acid Mine Waste Pollution. Industrial Wastes, vol. 2, No. 1, pp. 100–103.

COLMER, A. A.
1962. Relation of the Iron Oxidizer, *Thiobacillus ferro-oxidans*, to Thiosulphate. Journal of Bacteriology, vol. 83, pp. 761–765.

DAVIS, C. C.
1955. Plankton and Industrial Pollution

in Cleveland Harbor. Sewage and Industrial Wastes, vol. 27, No. 7, pp. 835–850.

Doudoroff, P. and M. Katz
1950. Critical Review of Literature on the Toxicity of Industrial Wastes and Their Components to Fish. I. Alkalies, Acids, and Inorganic Gases. Sewage and Industrial Wastes, vol. 22, No. 11, pp. 1432–1458.

Dunstan, G. H. and L. L. Smith
1960. Experimental Operation of Industrial Waste Stabilization Ponds. Public Works, vol. 91, No. 4, pp. 93–95.

Gillette, L. A., D. L. Miller and H. E. Redman
1952. Appraisal of a Chemical Waste Problem by Fish Toxicity Tests. Sewage Works Journal, vol. 24, No. 11, pp. 1397–1401.

Hawkes, H. A.
1963. Effects of Domestic and Industrial Discharge on the Ecology of Riffles in Midland Streams. International Journal of Air and Water Pollution, vol. 7, Nos. 6 and 7, pp. 565–586.

Lackey, J. B.
1938. Flora and Fauna of Surface Waters Polluted by Acid Mine Drainage. Public Health Reports, vol. 53, pp. 1499–1507.

Lackey, J. B.
1939. Aquatic Life in Waters Polluted by Acid Mine Waste. Public Health Reports, vol. 54, pp. 740–746.

Mehsen, J. J.
1953. Microbiological Study of Acid Mine Waters: Preliminary Report. Ohio Journal of Science, vol. 53, No. 2, pp. 123–127.

Olson, R. A., H. F. Brust and W. L. Tressler
1941. Studies of the Effects of Industrial Pollution in the Lower Patapsco River Area, 1: Curtis Bay Region, 1941. Board of Natural Resources, State of Maryland Department of Research and Education, Chesapeake Biological Laboratory, Publication No. 43, pp. 1–40.

Parsons, J. W.
1952. A Biological Approach to the Study and Control of Acid Mine Pollution. Journal of the Tennessee Academy of Sciences, vol. 27, No. 4, pp. 304–308.

COOLING WATER

Agersborg, H. F. K.
1930. The Influence of Temperature on Fish. Ecology, vol. 11, No. 1, pp. 136–144.

Arnold, G. E.
1962. Thermal Pollution of Surface Supplies. Journal of the American Water Works Association, vol. 54, No. 11, pp. 1332–1346.

Brett, J. R.
1944. Some Lethal Temperature Relations of Algonquin Park Fishes. Ontario Fisheries Research Laboratory, Publication No. 52, pp. 1–49.

Brett, J. R.
1956. Some Principles in the Thermal Requirements of Fishes. Quarterly Review of Biology, vol. 31, No. 2, pp. 75–87.

Coutant, C. C.
1963. The Effect of a Heated Water Effluent Upon the Macroinvertebrate Riffle Fauna of the Delaware River. Proceedings of the Pennsylvania Academy of Sciences, vol. 36, pp. 58–71.

Dryer, W. and N. G. Benson
1957. Observations on the Influence of the New Johnsonville Steam Plant on Fish and Plankton Populations. In: Proceedings of the 10th Annual Conference of the Southeastern Association of Game and Fish Commissioners, pp. 85–91.

Hoak, R. D.
1961. The Thermal Pollution Problem. Journal of the Water Pollution Control Federation, vol. 33, No. 12, pp. 1267–1276.

Laberge, R. H.
1959. A Critical Problem in Stream Pollution Comes from Thermal Discharges. Water and Sewage Works, vol. 106, No. 12, pp. 536–540.

Markowski, S.
1959. The Cooling Water of Power Sta-

tions. A New Factor in the Environment of Marine and Freshwater Invertebrates. Journal of Animal Ecology, vol. 28, No. 2, pp. 243–258.

MARKOWSKI, S.
1960. Observations on the Response of Some Benthonic Organisms to Power Station Cooling Water. Journal of Animal Ecology, vol. 29, No. 2, pp. 349–357.

SPRAGUE, J. B.
1963. Resistance of Four Freshwater Crustaceans to Lethal High Temperature and Low Oxygen. Journal of the Fisheries Research Board of Canada, vol. 20. No. 2, pp. 387–415.

TREMBLEY, F. J.
1965. Effects of Cooling Water from Steam-Condenser Power Plants on Stream Biota. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 334–345.

VAN VLIET, R.
1958. Effect of Heated Condenser Discharge Upon Aquatic Life. American Society of Mechanical Engineers, Paper No. 57, PWR–4, pp. 1–10.

FOOD, DRUGS, AND FERMENTATION

INGOLS, R. S.
1960. Studies on the Toxicity and Decomposition of Fluosilicic Acid. Journal of the American Water Works Association, vol. 52, No. 7, pp. 927–929.

KELLING, E. E.
1963. Minnow Population of Grimes Creek in Relation to Pollution. Proceedings of the Iowa Academy of Sciences, vol. 70, pp. 236–239.

LACKEY, J. B., W. T. CALAWAY and G. B. MORGAN
1956. Biological Purification of Citrus Wastes. Sewage and Industrial Wastes, vol. 28, No. 4, pp. 538–546.

LUNSFORD, J. V.
1957. Effect of Cannery Waste Removal on Stream Conditions. Sewage and Industrial Wastes, vol. 29, No. 4, pp. 428–431.

MALONEY, T. E., H. F. LUDWIG, J. A. HARMON and L. MCCLINTOCK
1960. Effect of Whey Wastes on Stabilization Ponds. Journal of the Water Pollution Control Federation, vol. 32, No. 12, pp. 1283–1299.

SANBORN, N. H.
1941. Nitrate Treatment of Cannery Waste. Fruit Products Journal, vol. 20, pp. 207, 215, 221.

SANBORN, N. H.
1945. The Lethal Effect of Certain Chemicals to Fish. Canning Trade, vol. 67, No. 49, pp. 10, 12, 26.

SHAW, P. A.
1937. Pollution of the Mokelumne River by Winery Wastes. Sewage Works Journal, vol. 9, No. 4, pp. 599–606.

WALKER, C. L., et al.
1923. Studies on the Treatment and Disposal of Dairy Wastes. Effects on Fish Life. Cornell University Agricultural Experiment Station, Bulletin 425, pp. 1–171.

WISNIEWSKI, T. F.
1948. The Chemistry and Biology of Milk Waste Disposal. Journal of Milk and Food Technology, vol. 11, No. 5, pp. 293–300.

METALS AND MANUFACTURING

ALLEN, L. A., N. BLEZARD and A. B. WHEATLAND
1948. Formation of Cyanogen Chloride During Chlorination of Certain Liquids—Toxicity of Such Liquids to Fish. Journal of Hygiene, vol. 46, pp. 184–193.

CARPENTER, K. E.
1925. On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution Due to Lead-Mining. Annals of Applied Biology, vol. 12, No. 1, pp. 1–13.

CARPENTER, K. E.
1926. The Lead Mine as an Active Agent in River Pollution. Annals of Applied Biology, vol. 13, No. 3, pp. 395–401.

CAWLEY, W. A. and C. C. WELLS, JR.
1959. Lagoon System for Chemical Cellulose. Industrial Wastes, vol. 4, No. 5, pp. 37–39.

CORCORAN, A. N.
1950. Treatment of Cyanide Wastes from the Electroplating Industry. Sewage and Industrial Wastes, vol. 22, No. 2, pp. 228–238.

DAVIS, C. C.
1948. Studies of the Effects of Industrial Pollution in the Lower Patapsco River Area, 2: The Effect of Copperas Pollution on Plankton. Board of Natural Resources, Department of Research and Education, Chesapeake Biology Laboratory, University of Maryland, Publication No. 72, pp. 3–12.

DEGANI, J. B.
1943. Studies of the Toxicity of Ammunition Plant Waste to Fishes. Transactions of the American Fisheries Society, vol. 73, pp. 45–51.

DOBSON, J. G.
1947. Disposal of Cyanide Wastes. Metal Finishing, vol. 45, No. 2, pp. 78–81; No. 3, pp. 68–71.

DODGE, B. F. and D. C. REAMS
1949. Disposal of Plating Room Wastes. American Electroplating Society, Research Report Serial No. 14, Jenkintown, Pa., pp. 1–48.

DOUDOROFF, P.
1956. Some Experiments on the Toxicity of Complex Cyanides to Fish. Sewage and Industrial Wastes, vol. 28, No. 8, pp. 1020–1040.

GOLLMAN, H. A.
1947. Industrial Wastes. Coke and Gas Industry. Industrial Engineering Chemistry, vol. 39, No. 5, pp. 596–601.

GORHAM, E. and A. G. GORDON
1963. Some Effects of Smelter Pollution Upon Aquatic Vegetation Near Sudbury, Ontario. Canadian Journal of Botany, vol. 41, pp. 371–378.

GRINDLEY, J.
1945. Treatment and Disposal of Waste Waters Containing Chromate. Journal of the Society of the Chemical Industry, vol. 64, pp. 339–344.

HIGGINS, E.
1933. Mine Pollution in Coeur d' Alene District in Idaho. Progress in Biological Inquiries 1932. Appendix II to Report. Commissioner of Fisheries for Fiscal Year 1933, p. 143.

JONES, J. R. E.
1940. The Fauna of the River Melindwr, a Lead-Polluted Tributary of the River Rheidol, in North Cardiganshire, Wales. Journal of Animal Ecology, vol. 9, pp. 188–201.

JONES, J. R. E.
1940. A Study of the Zinc-Polluted River Ystwyth, in North Cardiganshire, Wales. Annals of Applied Biology, vol. 27, pp. 368–378.

KLASSEN, C. W., W. A. HASFURTHER and M. K. YOUNG
1949. The Toxicity of Hexavalent Chromium to Sunfish and Bluegills. Proceedings of the Fourth Industrial Waste Conference. Purdue University, Engineering Bulletin, Extension Series No. 68, pp. 229–237.

KROMBACH, H. and J. BARTHEL
1963. Investigation of a Small Watercourse Accidentally Polluted by Phenol Compounds. International Journal of Air and Water Pollution, vol. 7, No. 1, pp. 39–46.

KRUMHOLZ, L. A., and W. L. MINCKLEY
1964. Changes in the Fish Population in the Upper Ohio River Following Temporary Pollution Abatement. Transactions of the American Fisheries Society, vol. 93, No. 1, pp. 1–5.

LAURIE, R. D. and J. R. E. JONES
1938. The Faunistic Recovery of a Lead Polluted River in North Cardiganshire, Wales. Journal of Animal Ecology, vol. 7, pp. 272–286.

LEWIS, W. M. and C. PETERS
1956. Coal Mine Slag Drainage, Toxicity to Representative Fishes. Industrial Wastes, vol. 1, No. 4, pp. 145–147.

MALANEY, G. W., W. D. SHEETS and R. QUILLIN
1959. Toxic Effects of Metallic Ions on Sewage Micro-organisms. Sewage and Industrial Wastes, vol. 31, No. 11, pp. 1309–1315.

NEWTON, L.
1944. Pollution of the Rivers of West Wales by Lead and Zinc Mine Effluent. Annals of Applied Biology, vol. 31, No. 1, pp. 1–11.

OEMING, L. F.
1946. Stream Pollution Problems of the Electroplating Industry. Sewage Works Journal, vol. 18, No. 4, pp. 678–685.

PARSONS, J. W.
1952. A Biological Approach to the Study and Control of Acid Mine Pollution. Journal of the Tennessee Academy of Science, vol. 27, No. 4, pp. 304–309.

PAUTZKE, C. F.
1937. Studies on the Effect of Coal Washings on Steelheads and Cutthroat Trout. Transactions of the American Fisheries Society, vol. 67, pp. 232–233.

SHAW, P. A. and J. A. MAGA
1943. The Effects of Mining Silt on Yield of Fry from Salmon Spawning Beds. California Fish and Game, vol. 9, No. 1, pp. 29–41.

SHEETS, W. D.
1957. Toxicity Studies of Metal-Finishing Wastes. Sewage and Industrial Wastes, vol. 29, No. 12, pp. 1380–1384.

SMITH, O. R.
1939. Placer Mining Silt and Its Relation to Salmon and Trout on the Pacific Coast. Transactions of the American Fisheries Society, vol. 69, pp. 225–230.

SMITH, R. T.
1938. Cyanide Bearing Ore Mill Refuse as a Menace to Fish Life. Science, vol. 87, pp. 552-553.

SOUTHGATE, B. A.
1933. Coke Oven Effluents. Investigations of Their Toxicity. Gas Journal, vol. 202, pp. 216–218.

SPRAGUE, J. D. and W. V. CARSON
1964. Changes in Mining Pollution of the Northwest Mirimichi River from June 30, 1960 to the End of 1963. Fisheries Research Board of Canada, Biological Station, St. Andrews, New Brunswick. General Series Circular No. 42, pp. 1–4.

SURBER, E. W.
1959. *Cricotopus bicinctus*, a Midgefly Resistant to Electroplating Wastes. Transactions of the American Fisheries Society, vol. 88, No. 2, pp. 111–116.

TUPHOLME, C. H. S.
1933. Death of Fish from Cyanides in Coke-Oven Effluents. Industrial and Engineering Chemistry, News Edition, vol. 11, No. 14, p. 211.

TURNER, W. R.
1958. The Effects of Acid Mine Pollution on the Fish Population of Goose Creek, Clay County, Kentucky. Progressive Fish Culturist, vol. 20, No. 1, pp. 45–46.

WALLEN, I. E., W. C. GREER and R. LASATER
1957. Toxicity to *Gambusia affinis* of Certain Pure Chemicals in Turbid Waters. Sewage and Industrial Wastes, vol. 29, No. 6, pp. 695–711.

WARD, H. B.
1938. Placer Mining and the Anadromous Fish of the Rogue River. Science, vol. 88, pp. 441–443.

WASHBURN, G. N.
1948. The Toxicity to Warm Water Fishes of Certain Cyanide Plating and Carburizing Salts Before and After Treatment by the Alkali-Chlorination Method. Sewage Works Journal, vol. 20, No. 6, pp. 1074-1083.

WISE, W. S., B. F. DODGE and H. BLISS
1947. Industrial Wastes. Brass and Copper Industry. Industrial and Engineering Chemistry, vol. 39, No. 5, pp. 632–636.

PETROLEUM

CHIPMAN, R. K.
1959. Studies of Tolerance of Certain Freshwater Fishes to Brine Water from Oil Wells. Ecology, vol. 40, No. 2, pp. 299–302.

CLEMENS, H. P. and W. H. JONES
1954. Toxicity of Brine Water from Oil Wells. Transactions of the American Fisheries Society, vol. 84, pp. 97-109.

Clemens, H. P. and J. C. Finnell
1956. Biological Conditions in a Stream Receiving Refinery Effluents. Texas Journal of Science, vol. 8, No. 12, pp. 392–398.

Copeland, B. J., K. W. Minter and T. C. Dorris
1964. Chlorophyll A and Suspended Organic Matter in Oil Refinery Effluent Holding Ponds. Limnology and Oceanography, vol. 9, No. 4, pp. 500–506.

Douglas, N. H. and W. H. Irwin
1963. Relative Resistance of Fish to Petroleum Refinery Wastes. Part 3. Industrial Water and Wastes, vol. 8, No. 2, pp. 22–25.

Edmison, M. T.
1959. Mobile Laboratory for Assaying Refinery Wastes. Industrial and Engineering Chemistry, vol. 51, No. 8, pp. 69A–70A.

English, J. N., G. N. McDermott and C. Henderson
1963. Pollutional Effects of Outboard Motor Exhaust—Laboratory Studies. Journal of the Water Pollution Control Federation, vol. 35, No. 9, pp. 1121–1132.

Gould, W. R. and T. C. Dorris
1961. Toxicity Changes of Stored Oil Refinery Effluents. Journal of the Water Pollution Control Federation, vol. 33, No. 10, pp. 1107–1111.

Ludzack, F. J., W. M. Ingram and M. B. Ettinger
1957. Characteristics of a Stream Composed of Oil Refinery and Activated Sludge Effluents. Sewage and Industrial Wastes, vol. 29, No. 10, pp. 1177–1189.

McClintock, J. H.
1959. Evaluate Pollution Control This Way. Petroleum Refiner, vol. 38, No. 3, pp. 201-206.

Miller, J. E. and G. F. Ullrich
1956. Goldfish are Good Sanitary Inspectors. Petroleum Engineering, vol. 28, No. 10, pp. C9–12.

Tagatz, M. E.
1961. Reduced Oxygen Tolerance and Toxicity of Petroleum Products to Juvenile American Shad. Chesapeake Science, vol. 2, No. 1–2, pp. 65–71.

Tubb, R. A. and T. C. Dorris
1965. Herbivorous Insect Populations in Oil Refinery Effluent Holding Pond Series. Limnology and Oceanography, vol. 10, No. 1, pp. 121–134.

Turnbull, H., J. G. DeMann and R. F. Weston
1954. Toxicity of Various Refinery Materials to Fresh Water Fish. Industrial and Engineering Chemistry, vol. 46, No. 2, pp. 324–333.

Wiebe, A. H., J. G. Burr and H. E. Faubion
1934. The Problem of Stream Pollution in Texas with Special Reference to Salt Water from Oil Fields. Transactions of the American Fisheries Society, vol. 64, pp. 81–85.

Wiebe, A. H.
1935. The Effect of Crude Oil on Freshwater Fish. Transactions of the American Fisheries Society, vol. 64, pp. 324–350.

PULP, PAPER, AND TEXTILES

Alderdice, D. F. and J. R. Brett
1957. Some Effects of Kraft Mill Effluent on Young Pacific Salmon. Journal of the Fisheries Research Board of Canada, vol. 14, pp. 783–795.

Amberg, H. R. and R. Elder
1956. Intermittent Discharge of Spent Sulfite Liquor. Journal of the Sanitary Engineering Division, Proceedings of the American Society of Civil Engineers, Proceedings Paper 929, pp. 1–14.

Amberg, H. R., J. F. McCormack and M. R. Rivers
1962. Slime Growth Control by Intermittent Discharge of Spent Sulphite Liquor. Technical Association of the Pulp and Paper Industry, vol. 45, pp. 770–779.

Baldwin, R. E., D. H. Strong and J. H. Torrie
1961. Flavor and Aroma of Fish Taken from Four Fresh-water Sources. Transactions of the American Fisheries Society, vol. 90, No. 2, pp. 175–180.

BEAK, T. W.
1963. Water Pollution of the Pulp and Paper Industry. Pulp and Paper Magazine of Canada, vol. 64, pp. 527–531.

BLOSSER, R. O.
1960. Oxidation Lagoons. Technical Association of the Pulp and Paper Industry, vol. 43, No. 5, pp. 454–458.

COLE, A. E.
1935. Water Pollution Studies in Wisconsin. Effects of Industrial (Pulp and Paper Mill) Wastes on Fish. Sewage Works Journal, vol. 7, No. 2, pp. 280–302.

COOKE, W. B.
1963. Fungi Associated with Spent Sulfite Liquor Disposal in a Natural Sand Bed. Technical Association of the Pulp and Paper Industry, vol. 46, pp. 573-578.

CORMACK, J. F. and H. R. AMBERG
1959. The Effect of Biological Treatment of Sulfite Waste Liquor on the Growth of *Sphaerotilus natans*. Proceedings of the 14th Industrial Waste Conference, Purdue University, vol. 44, No. 5, pp. 16–25.

EXTROM, J. A. and D. S. FARNER
1943. Effect of Sulfate Wastes on Fish Life. Paper Trade Journal, vol. 117, pp. 27–32.

FUJIYA, M.
1961. Effects of Kraft Pulp Mill Wastes on Fish. Journal of the Water Pollution Control Federation, vol. 33, No. 9, pp. 968–977.

GOODNIGHT, C. J.
1942. Toxicity of Sodium Pentachlorophenate and Pentachlorophenol to Fish. Industrial and Engineering Chemistry, vol. 34, No. 7, pp. 868–872.

HAYDU, E. P., H. R. AMBERG and R. E. DIMICK
1952. The Effects of Kraft Mill Waste Components on Certain Salmonid Fishes of the Pacific Northwest. Technical Association of the Pulp and Paper Industry, vol. 35, No. 12, pp. 545–549.

HOLLAND, G. A. (ed.)
1953. Toxic Effects of Sulfate Waste Liquor on Young Salmon. State of Washington, Department of Fisheries, Research Bulletin, No. 1, pp. 1–111.

JONES, B. F., C. E. WARREN, C. E. BOND and P. DOUDOROFF
1956. Avoidance Reactions of Salmonid Fishes to Pulp Mill Effluents. Sewage and Industrial Wastes, vol. 28, No. 11, pp. 1403–1413.

MALONEY, T. E.
1959. Utilization of Sugars in Spent Sulfite Liquor by a Green Alga, *Chlorococcum macrostigmatum*. Sewage and Industrial Wastes, vol. 31, No. 12, pp. 1395–1400.

MALONEY, T. E. and E. L. ROBINSON
1961. Growth and Respiration of a Green Alga in Spent Sulfite Liquor. Technical Association of the Pulp and Paper Industry, vol. 44, No. 2, pp. 137–141.

NIGHTINGALE, H. W. and V. LOSSANOFF
1928. The Effects of Waste Sulphite Liquor on the Early Stages of the Chinook Salmon, and Means of Prevention by Disposal Methods. Transactions of the American Fisheries Society, vol. 58, pp. 232–238; (discussion, pp. 238–244).

SMITH, L. L., JR., R. H. CRAMER and J. C. MACLEOD
1965. Effects of Pulpwood Fibers on Fathead Minnows and Walleye Fingerlings. Journal of the Water Pollution Control Federation, vol. 37, No. 1, pp. 130–140.

VAN HORN, W. M.
1949. A Study of Kraft Pulping Wastes in Relation to the Aquatic Environment. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 49–55.

VAN HORN, W. M., J. B. ANDERSON and M. KATZ
1949. The Effect of Kraft Pulp Mill Wastes on Some Aquatic Organisms. Transactions of the American Fisheries Society, vol. 79, pp. 55–63.

VAN HORN, W. M. and R. BALCH
1955. Stream Pollutional Aspects of Slime Control Agents. Technical Association of the Pulp and Paper Industry, vol. 38, pp. 151-153.

WESTFALL, B. A.
1950. Stream Pollution Hazards of Wood Pulp Mill Effluents. U. S. Fish and Wildlife Service, Fishery Leaflet, No. 174, pp. 1–8.

WHITNEY, A. N. and J. C. SPINDLER
1959. Effects of Kraft Paper Wastes on a Montana Stream. Transactions of the American Fisheries Society, vol. 88, No. 2, p. 153.

WILSON, J. N.
1953. Effect of Kraft Mill Wastes on Stream Bottom Fauna. Sewage and Industrial Wastes, vol. 25, No. 10, pp. 1210–1218.

WOODWARD, F. E., O. J. SPROUL and P. F. ATKINS, JR.
1964. The Biological Degradation of Lignin from Pulp Mill Black Liquor. Journal of the Water Pollution Control Federation, vol. 36, No. 11, pp. 1401–1410.

ORGANISM IDENTIFICATION

GENERAL REFERENCES

EDDY, S. and A. C. HODSON
1955. Taxonomic Keys to the Common Animals of the North Central States, Exclusive of the Parasitic Worms, Insects, and Birds. Burgess Publishing Company, Minneapolis, Minnesota, 141 pp.

GARNETT, W. J.
1953. Freshwater Microscopy. Constable and Company, Ltd., 10–12 Orange St., London, 300 pp.

MORGAN, A. H.
1930. Fieldbook of Ponds and Streams. G. P. Putnam's Sons, New York, 448 pp.

NEEDHAM, J. G. and P. R. NEEDHAM
1962. A Guide to the Study of Fresh-Water Biology. *Fifth Edition*. Holden-Day, Inc., San Francisco, 89 pp.

PENNAK, R. W.
1953. Fresh-Water Invertebrates of the United States. The Ronald Press Company, New York, 769 pp.

WARD, H. B. and G. C. WHIPPLE (Edited by W. T. Edmondson)
1959. Fresh Water Biology. John Wiley and Sons, New York, 1,248 pp.

INSECTS

BERNER, L.
1950. The Mayflies of Florida. University of Florida Press, Gainesville, 267 pp.

BURKS, B. D.
1953. The Mayflies, or Ephemeroptera, of Illinois. Bulletin of the Illinois Natural History Survey, vol. 26, 216 pp.

CHU, H. F.
1949. How to Know the Immature Insects. Wm. C. Brown Company, Dubuque, Iowa, 234 pp.

COMSTOCK, J. H.
1940. An Introduction to Entomology. Comstock Publishing Company, Ithaca, New York, 1,083 pp.

EDMONDS, G. F., R. K. ALLEN and W. L. PETERS
1963. An Annotated Key to the Nymphs of the Families and Sub-families of Mayflies (Ephemeroptera). University of Utah Biological Series 13, No. 1, pp. 1–55.

FRISON, T. H.
1935. The Stoneflies, or Plecoptera, of Illinois. Bulletin of the Illinois Natural History Survey, vol. 20, pp. 281–471.

FRISON, T. H.
1942. Studies of North American Plecoptera, With Special Reference to the Fauna of Illinois. Bulletin of the Illinois Natural History Survey, vol. 22, No. 2, pp. 235–355.

GARMAN, P.
1927. The Odonata or Dragonflies of Connecticut. Guide to the Insects of Connecticut. Part V. Connecticut Geological Natural History Survey Bulletin, vol. 39, pp. 1–331.

HARDEN, P. H. and C. E. MICKEL
1952. The Stoneflies of Minnesota. University of Minnesota, Agricultural Experiment Station, pp. 1–84.

HUNT, B. P.
1953. The Life History and Economic Importance of a Burrowing Mayfly *Hexagenia limbata* in Southern Michigan Lakes. Bulletin No. 4 of the In-

stitute for Fisheries Research, Ann Arbor, Michigan, pp. 1–151.

JEWETT, S. G., JR.
1959. The Stoneflies (Plecoptera) of the Pacific Northwest. Oregon State Monographic Studies in Entomology, No. 3, pp. 1–95.

JOHANNSEN, O. A.
1934. Aquatic Diptera. Part I. Nemocera, Exclusive of Chironomidae and Ceratopogonidae. Cornell University Agricultural Experiment Station, Memoir 164, pp. 1–71.

JOHANNSEN, O. A.
1935. Aquatic Diptera. Part II. Orthorrhapha-Brachycera and Cyclorrhapha. Cornell University Agricultural Experiment Station, Memoir 177, pp. 1–62.

JOHANNSEN, O. A.
1937. Aquatic Diptera. Part III. Chironomidae: Subfamilies Tanypodinae, Diamesinae, and Orthocladinae. Cornell University Agricultural Experiment Station, Memoir 205, pp. 1–84.

JOHANNSEN, O. A. and L. C. THOMSEN
1937. Aquatic Diptera. Part IV. Chironomidae: Subfamily Chironominae. Part V. Ceratopogonidae. Cornell University Agricultural Experiment Station, Memoir 210, pp. 1–80.

JOHANNSEN, O. A., H. K. TOWNES, F. R. SHAW and E. G. FISHER
1952. Guide to the Insects of Connecticut. IV. The Diptera or True Flies. Fifth Fascicle: Midges and Gnats. State Geological Natural History Survey, Bulletin 80, pp. 1–255.

LAFFOON, J. L.
1960. Common Names of Insects. Bulletin of the Entomological Society of America, vol. 6, No. 4, pp. 175–211.

LUTZ, F. E.
1927. Field Book of Insects. G. P. Putnam's Sons, New York, 562 pp.

NEEDHAM, J. G. and P. W. CLASSEN
1925. A Monograph of the Plecoptera or Stoneflies of America North of Mexico. (Publications Vol. 2) Thomas Say Foundation of Entomological Society of America, Lafayette, Indiana, pp. 1–397.

NEEDHAM, J. G., J. R. TRAVER and Y. HSU
1935. The Biology of Mayflies. Comstock Publishing Company, Ithaca, New York, 759 pp.

NEEDHAM, J. G. and M. J. WESTFALL, JR.
1955. A Manual of the Dragonflies of North America Including the Greater Antilles and the Provinces of the Mexican Border. University of California Press, Berkeley, 615 pp.

PETERSON, A.
1951. Larvae of Insects. Part II. Coleoptera, Diptera, Neuroptera, Siphonaptera, Mecoptera, and Trichoptera. Edwards Brothers Incorporated, Ann Arbor, Michigan, 416 pp.

PETERSON, A.
1959. Larvae of Insects. Part I. Lepidoptera and Plant Infesting Hymenoptera. Fourth Edition. Edwards Brothers Incorporated, Ann Arbor, Michigan, 315 pp.

ROBACK, S. S.
1957. The Immature Tendipedids of the Philadelphia Area. Monographs of the Academy of Natural Sciences of Philadelphia, 180 pp.

ROSS, H. H.
1944. The Caddis Flies, or Trichoptera, of Illinois. Illinois Natural History Survey Bulletin, vol. 23, No. 1, pp. 1–326.

USINGER, R. L.
1956. Aquatic Insects of California with Keys to North American Genera and California Species. University of California Press, Berkeley, California, 508 pp.

WOOD, D. M., B. V. PETERSON, D. M. DAVIES and H. GYORKOS
1963. The Black Flies (Diptera: Simuliidae) of Ontario. Part II. Larval Identification, with Descriptions and Illustrations. Proceedings of the Entomological Society of Ontario, vol. 93, pp. 99–129.

FISH

Bailey, R. M., E. A. Lachner, C. C. Lindsey, C. R. Robins, P. M. Roedel, W. B. Scott and L. P. Woods
1960. A List of Common and Scientific Names of Fishes from the United States and Canada. American Fisheries Society, Special Publication No. 2, pp. 1–102.

Eddy, S. and T. Surber
1947. Northern Fishes. University of Minnesota Press, Minneapolis, 276 pp.

Forbes, S. A. and R. E. Richardson
1920. The Fishes of Illinois. Natural History Survey, Illinois, vol. 3, pp. 1–357.

Harlan, J. R. and E. B. Speaker
1955. Iowa Fish and Fishing (3rd Ed.). Iowa State Fish Commission, 377 pp.

Hubbs, C. L. and K. F. Lagler
1964. Fishes of the Great Lakes Region. University of Michigan Press, Ann Arbor, 135 pp.

Jordan, D. S.
1929. Manual of the Vertebrate Animals of the Northeastern United States. World Book Company, New York, 446 pp.

Kuhne, E. R.
1939. A Guide to the Fishes of Tennessee and the Mid-South. Division of Game and Fish, Nashville, Tennessee, pp. 1–124.

Lagler, K. F.
1956. Freshwater Fisheries Biology. Wm. C. Brown Company, Dubuque, Iowa, 421 pp.

Schrenkeisen, R.
1938. Editors J. T. Nichols and F. R. LaMonte. Fieldbook of Fresh-Water Fishes of North America North of Mexico. G. P. Putnam's Sons, New York, 312 pp.

Trautman, M. B.
1957. The Fishes of Ohio. Ohio State University Press, 683 pp.

ALGAE AND FLOWERING AQUATIC PLANTS

Hotchkiss, N.
1964. Pondweeds and Pondweedlike Plants of Eastern North America. U. S. Fish and Wildlife Service, Circular 187, pp. 1–30.

Hotchkiss, N.
1965. Bulrushes and Bulrushlike Plants of Eastern North America. U. S. Fish and Wildlife Service, Circular 221, pp. 1–19.

Fassett, N. C.
1960. A Manual of Aquatic Plants (With Revision Appendix by Eugene C. Ogden). University of Wisconsin Press, Madison, 405 pp.

Forest, H. S.
1954. Handbook of Algae. The University of Tennessee, Knoxville, Tennessee, 467 pp.

Muenscher, W. C.
1944. Aquatic Plants of the United States. Comstock Publishing Company, Ithaca, New York, 374 pp.

Prescott, G. W.
1951. Algae of the Western Great Lakes Area. Cranbrook Institute of Science, Bloomfield Hills, Michigan, 946 pp.

Prescott, G. W.
1954. How to Know the Fresh Water Algae. Wm. C. Brown Company, Dubuque, Iowa, 211 pp.

Smith, G. M.
1950. The Fresh-Water Algae of the United States. McGraw-Hill Book Company, New York, 719 pp.

Tiffany, L. H. and M. E. Britton
1952. The Algae of Illinois. The University of Chicago Press, Chicago, Illinois, 407 pp.

OTHER ORGANISMS

Baker, F. C.
1928. The Fresh-Water Mollusca of Wisconsin. Pt. I. Gastropoda, 507 pp.; Pt. II. Pelecypoda, 495 pp.; Bulletin 70, Wisconsin Geological and Natural History Survey, Madison, Wisconsin.

CALAWAY, W. T. and J. B. LACKEY

1962. Waste Treatment Protozoa, Flagellata. University of Florida, College of Engineering, Florida Engineering Series No. 3, pp. 1–140.

COOKE, W. B.

1963. A Laboratory Guide to Fungi in Polluted Waters, Sewage, and Sewage Treatment Systems. Their Identification and Culture. U. S. Public Health Service, Publication No. 999–WP–1, pp. 1–132.

GALLOWAY, T. W.

1911. The Common Fresh Water Oligochaeta of the United States. Transactions of the American Microscopical Society, vol. 30, No. 4, pp. 285-317.

GOODRICH, C.

1932. The Mollusca of Michigan. Michigan Handbook Series No. 5, University of Michigan, Ann Arbor, Michigan, pp. 1–120.

GOODRICH, C. and H. VAN DER SCHALIE

1944. A Revision of the Mollusca of Indiana. American Midland Naturalist, vol. 32, No. 2, pp. 257-326.

JAHN, T. L. and F. F. JAHN

1949. How to Know the Protozoa. Wm. C. Brown Company, Dubuque, Iowa, 234 pp.

KUDO, R.

1950. Protozoology. Charles C. Thomas, Publisher, Springfield, Illinois, 778 pp.

ASPECTS OF WATER QUALITY

BOOKS

ALLEE, W. C., A. E. EMERSON, O. PARK, T. PARK and K. P. SCHMIDT

1949. Principles of Animal Ecology. Saunders Publishing Company, Philadelphia, Pennsylvania, 837 pp.

ANON.

1939. Problems of Lake Biology. American Association for the Advancement of Science, Washington, D. C., 142 pp.

ANON.

1941. A Symposium on Hydrobiology. University of Wisconsin Press, Madison, Wisconsin, 405 pp.

ANON.

1957. Biological Problems in Water Pollution. Transactions of the 1st Seminar on Biological Problems, Robert A. Taft Sanitary Engineering Center, Cincinnnati, Ohio, pp. 1–272.

ANON.

1960. Biological Problems in Water Pollution. Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. Publication No. W60–3, pp. 1–285.

ANON.

1965. Biological Problems in Water Pollution. Transaction of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 1–424.

ANON.

1960. Standard Methods for the Examination of Water and Wastewater. Eleventh Edition, American Public Health Association, Incorporated, New York, 626 pp.

CAMP, T. R.

1963. Water and Its Impurities. Reinhold Publishing Corporation, New York, 355 pp.

CARSON, R.

1962. Silent Spring. Houghton Mifflen Company, Boston, Massachusetts, 368 pp.

FOGG, G. E.

1953. The Metabolism of Algae. Methuen & Company, Ltd., London, 149 pp.

FOGG, G. E.

1965. Algal Cultures and Phytoplankton. University of Wisconsin Press, Madison, Wisconsin, 136 pp.

FREY, D. G. (ed.)

1963. Limnology in North America. University of Wisconsin Press, Madison, 752 pp.

HAWKES, H. A.

1963. The Ecology of Waste Water Treatment. Pergamon Press, New York, 206 pp.

HAZEN, W. E. (ed.)

1964. Readings in Population and Community Ecology. W. B. Saunders Company, Philadelphia, 388 pp.

Heukelekian, H. and N. Donders (eds.)
1964. Principles and Applications in Aquatic Microbiology. John Wiley & Sons, New York, 470 pp.

Hobbs, A. T.
1950. Manual of British Water Supply Practice. The Institution of Water Engineers, W. Heffer & Sons Ltd., Cambridge, England, 910 pp.

Hutchinson, G. E.
1957. A Treatise on Limnology. John Wiley & Sons Incorporated, New York, vol. 1, 1,015 pp.

Hynes, H. B. N.
1963. The Biology of Polluted Waters. Liverpool University Press, Liverpool, England, 202 pp.

Jackson, D. F. (ed.)
1964. Algae and Man. Plenum Press, New York, 434 pp.

Jones, J. R. E.
1964. Fish and River Pollution. Butterworth & Company, Ltd. London, 202 pp.

Klein, L.
1957. Aspects of River Pollution. Academic Press, Incorporated, New York, 621 pp.

Lewin, R. A. (ed.)
1962. Physiology and Biochemistry of Algae. Academic Press, Incorporated, New York, 929 pp.

Macan, T. T.
1963. Fresh-Water Ecology. John Wiley & Sons, New York, 348 pp.

Mackenthun, K. M., W. M. Ingram and R. Porges
1964. Limnological Aspects of Recreational Lakes. U. S. Department of Health, Education, and Welfare, Public Health Service, Publication No. 1167, 167 pp.

Mackenthun, K. M.
1965. Nitrogen and Phosphorus in Water, An Annotated Selected Bibliography of Their Biological Effects. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 1305, 111 pp.

McKee, J. E. and H. W. Wolf
1963. Water Quality Criteria, 2nd Edition. The Resources Agency of California. State Water Quality Board, Publication No. 3-A, 548 pp.

Moulton, F. R. and F. Hitzel (eds.)
1949. Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., 87 pp.

Odum, E. P. (In Collaboration with H. T. Odum)
1959. Fundamentals of Ecology. 2nd Edition, Saunders Publishing Company, Philadelphia, 546 pp.

Pringsheim, E. G.
1964. Pure Cultures of Algae. Hafner Publishing Company, New York, 119 pp.

Rudd, R. L.
1964. Pesticides and the Living Landscape. University of Wisconsin Press, Madison, 320 pp.

Ruttner, F.
1963. Fundamentals of Limnology. University of Toronto Press, Toronto, Ontario, Third Edition, 242 pp.

Sparrow, F. K.
1960. Aquatic Phycomycetes. University of Michigan Press, Ann Arbor, 1214 pp.

Southgate, B. A.
1948. Treatment and Disposal of Industrial Waste Waters. Published by Her Majesty's Stationery Office, London, 327 pp.

Suckling, E. V.
1943. The Examination of Waters and Water Supplies. Fifth Edition. The Blakiston Company, Philadelphia, 849 pp.

Tryon, C. A. and R. T. Hartman (eds.)
1960. Ecology of Algae. Pymatuning Special Publication No. 2, Pymatuning Laboratory of Field Biology, University of Pittsburgh, Pennsylvania, 96 pp.

Udall, S. L.
1963. The Quiet Crisis. Holt, Rinehart and Winston, Incorporated, New York, 209 pp.

Welch, P. S.
1948. Limnological Methods. Blakiston Company, Philadelphia, 381 pp.

WELCH, P. S.
1952. Limnology. McGraw-Hill Book Company, New York, 471 pp.

WHIPPLE, G. C. (Revised by G. M. Fair and M. C. Whipple)
1948. The Microscopy of Drinking Water. Fourth Edition, John Wiley & Sons, Incorporated, New York, 586 pp.

YAPP, W. B.
1959. Effects of Pollution on Living Materials. The Institute of Biology, 41 Queen's Gate, London, England, 154 pp.

JOURNALS

AMERICAN FISHERIES SOCIETY TRANSACTIONS
Allen Press, Lawrence, Kansas *(Quarterly)*

THE AMERICAN MIDLAND NATURALIST *(Title Varies)*
University of Notre Dame, Notre Dame, Indiana *(Bimonthly)*

CALIFORNIA FISH AND GAME
California Division of Fish and Game, Berkeley, California *(Quarterly)*

THE CONSERVATIONIST
State of New York Conservation Department, Albany, New York *(Bimonthly)*

ECOLOGICAL MONOGRAPHS
Official Publication of the Ecological Society of America, Duke University Press, Durham, North Carolina *(Quarterly)*

ECOLOGY
Official Publication of the Ecological Society of America, Duke University Press, Durham, North Carolina *(Bimonthly)*

INDUSTRIAL AND ENGINEERING CHEMISTRY *(Title Varies)*
Washington, D. C. *(Monthly)*

INTERNATIONAL JOURNAL OF AIR AND WATER POLLUTION
Pergamon Press, New York *(Seven Issues Per Volume)*

JOURNAL OF THE AMERICAN WATER WORKS ASSOCIATION
Baltimore, Maryland *(Monthly)*

JOURNAL OF THE OHIO ACADEMY OF SCIENCE
Ohio State University, Department of Botany & Plant Pathology, 1735 Neil Avenue, Columbus 10, Ohio *(Bimonthly)*

JOURNAL OF THE SANITARY ENGINEERING DIVISION
Proceedings of the American Society of Civil Engineers, Ann Arbor, Michigan *(Bimonthly)*

JOURNAL OF THE WATER POLLUTION CONTROL FEDERATION
Washington, D. C. *(Monthly)*
Formerly: Sewage Works Journal, vol. 1–21, 1928–1949. Sewage & Industrial Wastes, vol. 22–31, 1950–1959.

LIMNOLOGY AND OCEANOGRAPHY
American Society of Limnology & Oceanography, Baltimore, Maryland *(Quarterly)*

LOUISIANA CONSERVATIONIST
Wildlife and Fisheries' Commission, New Orleans, Louisiana *(Monthly)*

NEW ENGLAND WATER WORKS ASSOCIATION JOURNAL
Boston, Massachusetts *(Quarterly)*

NEW YORK FISH AND GAME JOURNAL
New York Conservation Department, Albany, New York *(Semiannually)*

PROGRESSIVE FISH CULTURIST
U. S. Department of the Interior, Fish and Wildlife Service, Washington, D. C. *(Quarterly)*

PUBLIC HEALTH ENGINEERING ABSTRACTS
Public Health Service, Washington, D. C. *(Monthly)*

PUBLIC WORKS *(Title Varies Previously)*
Public Works J. Corporation, Ridgewood, New Jersey *(Monthly)*

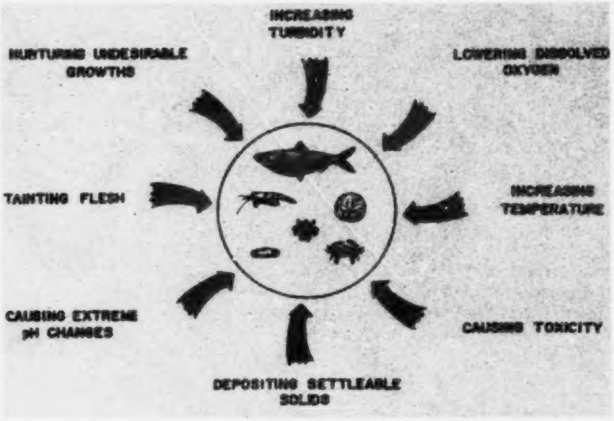
SANITALK
Massachusetts Department of Public Health, Division of Sanitary Engineering, Boston, Massachusetts *(Quarterly)*

SPORT FISHERIES ABSTRACTS
U. S. Department of the Interior, Fish and Wildlife Service, Washington, D. C. *(Quarterly)*

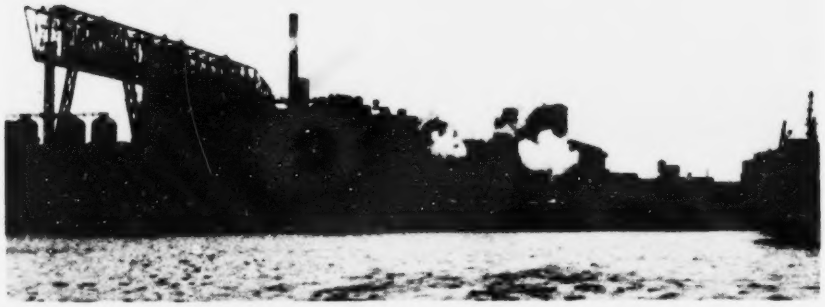
TRANSACTIONS OF THE WISCONSIN ACADEMY OF SCIENCES, ARTS, AND LETTERS
Madison, Wisconsin

WATER AND SEWAGE WORKS
E. Scranton Gillette, 185 N. Wabash Ave., Chicago, Illinois, Scranton Publishing Company *(Monthly)*

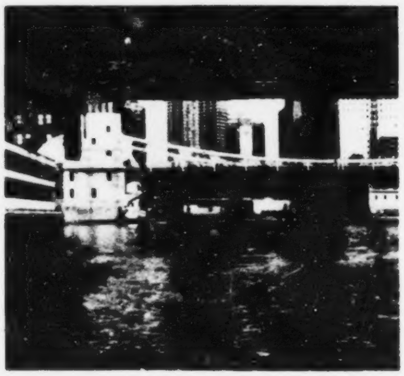
WATER POLLUTION ABSTRACTS
Her Majesty's Stationery Office, London, England *(Monthly)*


INCREASING TURBIDITY
NURTURING UNDESIRABLE GROWTHS
LOWERING DISSOLVED OXYGEN
TAINTING FLESH
INCREASING TEMPERATURE
CAUSING EXTREME pH CHANGES
CAUSING TOXICITY
DEPOSITING SETTLEABLE SOLIDS

Ways in which wastes may affect aquatic life.



Industrial waste source



Municipal waste source

Plate II—Water Pollution Control Aspects: Marine Waters

Preceding page blank

PART II

WATER POLLUTION CONTROL ASPECTS: MARINE WATERS

ACCELERATED ATTENTION to the control and abatement of pollution in fresh waters, expanding populations and industries on lands adjacent to the oceans, and recognition of the potential role of the oceans as sources of food have generated increased concern toward the defilement of marine waters.

Bacterial contamination of shellfish resources by municipal wastes is well documented, as is similar pollution of recreational beaches. Elsewhere pollution and decimation of shellfish and other food resources is associated with drainage and filling of tidal marshes, or diversion of water that is essential to maintain conditions suitable to the organisms. "Natural" amounts of nutrients, chiefly inorganic nitrogen and phosphorus, have been supplemented by sources from some coastal cities and industries. The combined nutrient load has been implicated in the development of massive quantities of unwanted marine plant growths that become deposited by waves or tides on shore reaches where they decay and emit foul odors.

Discoloration and tainting of animal foodstuffs have been noted in estuaries and bays burdened with strong wastes. Toxic materials, including pesticides, can comprise a major threat to the loss of desirable marine life if not carefully controlled. A relatively recent concern is the disposal of radioactive wastes and their long-term effects on marine as well as fresh water organisms.

As in fresh waters, multiple use of marine waters is paramount to any single use; control and abatement of pollution in marine waters is requisite to provide a maximum variety of uses beneficial to all.

WATER POLLUTION CONTROL

GENERAL REFERENCES

AYERS, J. C.
1955. Ocean Currents, Pollution—and Fish. New York Conservationist, vol. 9, No. 4, pp. 2–3.

AYERS, J. C.
1959. The Hydrography of Barnstable Harbor, Massachusetts. Limnology and Oceanography, vol. 4, No. 4, pp. 211–225.

BOWDEN, K. J.
1963. The Mixing Process in a Tidal Estuary. International Journal of Air and Water Pollution, vol. 7, Nos. 4 and 5, pp. 343–356.

BURT, W. V. and J. QUEEN
1957. Tidal Overmixing in Estuaries. Science, vol. 126, pp. 972–973.

Preceding page blank

BURT, W. V.
1959. Oxygen Anomalies in the Surf Near Coos Bay, Oregon. Ecology, vol. 40, No. 2, pp. 305–306.

BURT, W. V. and W. B. MCALISTER
1959. Recent Studies in the Hydrography of Oregon Estuaries. Fish Commission of Oregon, Research Briefs, vol. 7, No. 1, pp. 14–27.

CARRITT, D. E.
1956. Recent Developments in the Chemistry and Hydrography of Estuaries. Transactions 21st North American Wildlife Conference, Published by Wildlife Management Institute, Wire Building, Washington 5, D. C.

EBERMAN, J. W.
1956. Disposal of Wastes at Sea. Sewage and Industrial Wastes, vol. 28, No. 11, pp. 1365–1370.

ELDRIDGE, E. F. and R. O. SYLVESTER
1957. Silver Bay Water Pollution Control Studies Near Setka, Alaska. Alaska Water Pollution Control Board, Report No. 10, pp. 1–121.

ERIKSEN, A. and L. D. TOWNSEND
1940. The Occurrence and Cause of Pollution in Grays Harbor. State Pollution Commission, State of Washington, Pollution Series, Bulletin No. 2, pp. 1–100.

GALTSOFF, P. S., W. A. CHIPMAN, J. B. ENGLE and H. N. Calderwood
1947. Ecological & Physiological Studies of the Effect of Sulfate Pulp Mill Wastes on Oysters in the York River, Virginia. U. S. Fish & Wildlife Service, Fishery Bulletin No. 43, pp. 59–186.

GOTAAS, H. G.
1949. The Effects of Sea Water on the Biochemical Oxidation of Sewage. Sewage Works Journal, vol. 21, No. 5, pp. 818–839.

GUNTER, G.
1960. Pollution Problems Along the Gulf Coast. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 184–188.

HOOD, D. W.
1958. Waste Disposal in Marine Waters. Proceedings, Sixth Conference on Coastal Engineering, Florida, December 1957, pp. 607–624.

HULL, C. H. J.
1963. Photosynthetic Oxygenation of a Polluted Estuary. International Journal of Air and Water Pollution, vol. 7, Nos. 6 and 7, pp. 669–696.

JACKSON, C. F.
1944. A Biological Survey of Great Bay, New Hampshire: No. 1, Physical and Biological Features of Great Bay and the Present Status of Its Marine Resources. New Hampshire Marine Fisheries Commission, pp. 1–61.

KETCHUM, B. H.
1951. The Flushing of Tidal Estuaries. Sewage and Industrial Wastes, vol. 23, No. 2, pp. 198–209.

KETCHUM, B. H.
1951. The Exchanges of Fresh and Salt Waters in Tidal Estuaries. Journal of Marine Research, vol. 10, No. 1, pp. 18–38.

KETCHUM, B. H.
1954. Relation Between Circulation and Planktonic Populations in Estuaries. Ecology, vol. 35, No. 2, pp. 191–200.

KETCHUM, B. H.
1955. Distribution of Coliform Bacteria and Other Pollutants in Tidal Estuaries. Sewage and Industrial Wastes, vol. 27, No. 11, pp. 1288–1296.

KETCHUM, B. H.
1960. Marine Pollution Problems in the North Atlantic Area. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 212–217.

LIEBMAN, E.
1939 (1940). River Discharges and Their Effect on the Cycles and Productivity of the Sea. Proceedings of the Sixth Pacific Science Congress, vol. 3, pp. 517–523.

LYNN, W. R. and W. T. YANG
1960. The Ecological Effects of Sewage in Biscayne Bay. Oxygen Demand and Organic Carbon Determinations.

Bulletin of Marine Science of the Gulf and Caribbean, vol. 10, No. 4, pp. 491–509.

MARVIN, K. T., L. M. LANSFORD and R. S. WHEELER
1961. Effects of Copper Ore on the Ecology of a Lagoon. U. S. Fish and Wildlife Service, Fishery Bulletin 184, vol. 61, pp. 1–8.

MCNULTY, J. K., E. S. REYNOLDS and S. M. MILLER
1960. Ecological Effects of Sewage Pollution in Biscayne Bay, Florida: Distribution of Coliform Bacteria, Chemical Nutrients, and Volumes of Zooplankton. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 189–202.

MCPHERSON, M. B.
1960. Diffusion in a Sectionally Homogeneous Estuary. Proceedings of the American Society of Civil Engineers, Sanitary Engineering Division, vol. 86, No. SA–5, pp. 69–79.

MILLS, K. E.
1952. Some Aspects of Pollution Control in Tidal Waters. Sewage and Industrial Wastes, vol. 24, No. 9, pp. 1150–1158.

NELSON, T. C.
1960. Some Aspects of Pollution, Parasitism, and Inlet Restriction in Three New Jersey Estuaries. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 203–211.

NUSBAUM, I. and H. E. MILLER
1952. The Oxygen Resources of San Diego Bay. Sewage and Industrial Wastes, vol. 24, No. 12, pp. 1512–1527.

O'CONNOR, D. J.
1960. Oxygen Balance of an Estuary. Proceedings of the American Society of Civil Engineers, Sanitary Engineering Division, vol. 86, No. SA–3, pp. 35–55.

OLSON, R. A., H. F. BRUST and W. L. TRESSLER
1941. Studies of the Effects of Industrial Pollution in the Lower Patapsco River Area, 1: Curtis Bay Region, 1941. Board of Natural Resources State of Maryland Department of Research and Education, Chesapeake Biological Laboratory Publication No. 43, pp. 1–40.

PARKHURST, J. D., W. E. GARRISON and M. L. WHITT
1963. Effect of Wind, Tide and Weather on Nearshore Ocean Conditions. International Journal of Air and Water Pollution, vol. 7, No. 8, pp. 813–827.

PEARSON, E. A.
1956. An Investigation of the Efficacy of Submarine Outfall Disposal of Sewage and Sludge. California State Water Pollution Control Board, Sacramento, Publication No. 14, pp. 1–154.

PEARSON, E. A., R. D. POMEROY and J. E. MCKEE
1960. Summary of Marine Waste Disposal Research Program in California. California State Water Pollution Control Board, Sacramento, Publication No. 22, pp. 1–77.

PRITCHARD, D. W.
1956. The Dynamic Structure of a Coastal Plain Estuary. Journal of Marine Research, vol. 15, No. 1, pp. 33–42.

REISH, D. J. and J. L. BARNARD
1959. Marine Pollution. Water and Sewage Works, vol. 106, No. 6, pp. 259–262.

ROMER, H.
1956. The Health Departments Role in New York Harbor Pollution Control. Sewage and Industrial Wastes, vol. 28, No. 12, pp. 1495–1503.

RUDOLFS, W. and H. HEUKELEKIAN
1942. Raritan River Pollution Studies. Comparison of Results Obtained in 1927-28, 1937-38, 1940-41. Sewage Works Journal, vol. 14, No. 4, pp. 839–865.

SHUSTER, C. N., JR.
1959. A Biological Evaluation of the Delaware River Estuary. University of Delaware, Marine Laboratories, Information Series, Publication No. 3, pp. 1–77.

SIELING, F. W.
1947. Effects of Pollution at Baltimore on pH and Oxygen Content of Water. Papers of the National Shellfisheries Association, pp. 50–54.

SIMMONS, H. B.
1955. Some Effects of Upland Discharge on Estuarine Hydraulics. Proceedings of the American Society of Civil Engineers, Hydraulics Division, vol. 81, No. 792, pp. 1–20.

THOMPSON, S. H.
1961. What is Happening to Our Estuaries? Transactions of the North American Wildlife Conference, vol. 26, pp. 318–322.

TIBBY, R. B. and J. L. BARNARD
1963. Some Physical and Biological Characteristics of Open Coastal Waters and Their Relationship to Waste Discharge. International Journal of Air and Water Pollution, vol. 7, No. 8, pp. 865–888.

TULLY, J. P.
1948. Pollution Research in Alberni Inlet. Fisheries Research Board of Canada, Pacific Progress Report, No. 76, pp. 66–71.

TYLER, R. G.
1950. Disposal of Sewage Into Tidal Waters. Sewage and Industrial Wastes, vol. 22, No. 5, pp. 685–696.

ZOBELL, C. E.
1960. Marine Pollution Problems in Southern California. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 177–183.

BACTERIA

BUCK, T. C., JR., C. E. KEEFER and H. HATCH
1952. Viability of Coliform Organisms in Estuary Waters. Sewage and Industrial Wastes, vol. 24, No. 6, pp. 777–784.

CARLUCCI, A. F. and D. PRAMER
1959. Microbiological Process Report. Factors Affecting Survival of Bacteria in Sea Water. Applied Microbiology, vol. 7, No. 6, pp. 388–392.

CARLUCCI, A. F. and D. PRAMER
1960. An Evaluation of Factors Affecting the Survival of *Escherichia coli* in Sea Water. I-IV. Applied Microbiology, vol. 8, No. 4, pp. 243–256.

ERDMAN, J. E. and A. D. LENNONT
1956. The Self-Cleansing of Soft-Shell Clams; Bacteriological and Public Health Aspects. Canadian Journal of Public Health, vol. 47, No. 5, pp. 196–202.

FELDMAN, G. and C. WINSLOW
1941. The Influence of Sewage Treatment Upon the Bacterial Pollution of New Haven Harbor. American Journal of Hygiene, vol. 34, No. 1, pp. 91–101.

GREENBERG, A. E.
1956. Survival of Enteric Organisms in Sea Water. Public Health Reports, vol. 71, No. 1, pp. 77–86.

GUNNERSON, C. G.
1958. Sewage Disposal in Santa Monica Bay, California. Proceedings of the American Society of Civil Engineers, Sanitary Engineering Division, vol. 84, No. SA–1, pp. 1–28.

HARRIS, E. K.
1958. On the Probability of Survival of Bacteria in Sea Water. Biometrics, vol. 14, pp. 195–206.

HOOD, D. W., B. STEVENSON and L. M. JEFFREY
1958. Deep Sea Disposal of Industrial Wastes. Industrial and Engineering Chemistry, vol. 50, No. 6, pp. 885–888.

JANNASCH, H. W. and G. E. JONES
1959. Bacterial Populations in Sea Water as Determined by Different Methods of Enumeration. Limnology and Oceanography, vol. 4, No. 2, pp. 128–139.

KELLY, C. B. and W. ARCISZ
1954. Survival of Enteric Organisms in Shellfish. Public Health Reports, vol. 69, No. 12, pp. 1205–1210.

Kelly, C. B.

1956. Public Health Service Research on Shellfish Bacteriology. Proceedings of the National Shellfisheries Association, vol. 46, No. 1, pp. 21–26.

Kelly, C. B., W. Arcisz, M. W. Presnell and E. K. Harris

1960. Bacterial Accumulation by the Oyster, *Crassostrea virginica*, on the Gulf Coast. U. S. Public Health Service, Robert A. Taft Sanitary Engineeding Center, Technical Report F60–4, pp. 1–45.

Ketchum, B. H., J. C. Ayers and R. F. Vaccaro

1952. Processes Contributing to the Decrease of Coliform Bacteria in a Tidal Estuary. Ecology, vol. 33, No. 2, pp. 247–258.

Ketchum, B. H.

1955. Distribution of Coliform Bacteria and Other Pollutants in Tidal Estuaries. Sewage and Industrial Wastes, vol. 27, No. 11, pp. 1288–1296.

Knowlton, W. T.

1929. Bacillus Coli Surveys, Los Angeles Ocean Outfall. California Sewage Works Journal, vol. 2, pp. 150–152.

Lear, D. W.

1962. Growth of Coliform Bacteria in Estuarine Waters. Chesapeake Science, vol. 3, No. 3, pp. 160–165.

McNulty, J. K., E. S. Reynolds and S. M. Miller

1960. Ecological Effects of Sewage Pollution in Biscayne Bay, Florida: Distribution of Coliform Bacteria, Chemical Nutrients, and Volumes of Zooplankton. In: Biological Problems in Water Pollution—Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 189–202.

Nusbaum, I. and R. M. Garver

1955. Survival of Coliform Organisms in Pacific Ocean Coastal Waters. Sewage and Industrial Wastes, vol. 27, No. 12, pp. 1383–1390.

Orlob, G. T.

1956. Viability of Sewage Bacteria in Sea Water. Sewage and Industrial Wastes, vol. 28, No. 9, pp. 1147–1167.

Reuszer, H. W.

1933. Marine Bacteria and their Role in the Cycle of Life in the Sea. III. The Distribution of Bacteria in the Ocean Waters and Muds About Cape Cod. Biological Bulletin, Woods Hole, vol. 65, No. 3, pp. 480–497.

Rittenberg, S. C., T. Mittwer and D. Ivler

1958. Coliform Bacteria in Sediments Around Three Marine Sewage Outfalls. Limnology and Oceanography, vol. 3, No. 1, pp. 101–108.

Starr, T. J. and M. E. Jones

1957. The Effect of Copper on the Growth of Bacteria Isolated from Marine Environments. Limnology and Oceanography, vol. 2, No. 1, pp. 33–36.

Vaccaro, R. F., M. O. Briggs, C. L. Carey and B. H. Ketchum

1950. Viability of *Escherichia coli* in Sea Water. American Journal of Public Health, vol. 40, No. 10, pp. 1257–1266.

Waksman, S. A. and M. Hotchkiss

1938. On the Oxidation of Organic Matter in Marine Sediments by Bacteria. Massachusetts, Woods Hole and Massachusetts Bay. Journal of Marine Research, vol. 1, No. 2, pp. 101–118.

Ward, B. Q. and B. J. Carroll

1965. Presence of *Clostridium botulinum* Type E in Estuarine Waters. Applied Microbiology, vol. 13, No. 3, p. 502.

Weiss, C. M.

1951. Adsorption of *E. coli* on River and Estuarine Silts. Sewage and Industrial Wastes, vol. 23, No. 2, pp. 227–237.

Wilson, T. E. and C. S. McCleskey

1951. Indices of Pollution in Oysters. Food Research, vol. 16, pp. 313–319.

Wood, E. J. F.

1958. The Significance of Marine Microbiology. Bacteriological Review, vol. 22, No. 1, pp. 1–19.

ZoBell, C. E.

1960. Marine Pollution Problems in the Southern California Area. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 177–183.

ALGAE AND PLANKTON

Bandy, O. L., J. C. Ingle, Jr. and J. M. Resig
1964. Foraminifera, Los Angeles County Outfall Area, California. Limnology and Oceanography, vol. 9, No. 1, pp. 124–137.

Barlow, J. P.
1955. Physical and Biological Processes Determining the Distribution of Zooplankton in a Tidal Estuary. Biological Bulletin, Woods Hole, vol. 109, No. 2, pp. 211–225.

Barlow, J. P., C. J. Larenzen and R. T. Myren
1963. Eutrophication of a Tidal Estuary. Limnology and Oceanography, vol. 8, No. 2, pp. 251–262.

Clendenning, K. A. and W. J. North
1960. Effects of Wastes on the Giant Kelp *Macrocystis pyrifera*. In: Pearson, E. A., (ed.) Waste Disposal in the Marine Environment. Pergamon Press, N. Y., pp. 82–91.

Frolander, H. F.
1964. Biological and Chemical Features of Tidal Estuaries. Journal of the Water Pollution Control Federation, vol. 36, No. 8, pp. 1037–1048.

Hood, D. W., B. Stevenson and L. M. Jeffrey
1958. Deep Sea Disposal of Industrial Wastes. Industrial and Engineering Chemistry, vol. 50, No. 6, pp. 885–888.

Hull, C. H. J.
1961. Algae and Organic Waste Assimilation in Tidal Estuaries. Proceedings 34 Annual Conference, Maryland-Delaware Water and Sewage Association, pp. 37–52.

Hull, C. H. J.
1963. Oxygenation of Baltimore Harbor by Planktonic Algae. Journal of the Water Pollution Control Federation, vol. 35, No. 5, pp. 587–606.

Jeffries, H. P.
1962. Environmental Characteristics of Raritan Bay, A Polluted Estuary. Limnology and Oceanography, vol. 7, No. 1, pp. 21–31.

Johannes, R. E.
1965. Influence of Marine Protozoa on Nutrient Regeneration. Limnology and Oceanography, vol. 10, No. 3, pp. 434–442.

Ketchum, B. H.
1951. Plankton Algae and Their Biological Significance. In: Smith, G. M. (ed.) Manual of Phycology—An Introduction to the Algae and Their Biology, Chapter 17, pp. 335–346.

Krishnamoorthy, K. P. and G. Visweswara
1963. Hydrobiological Studies with Reference to Sudden Fish Mortality. Hydrobiologia, vol. 21, Nos. 3 and 4, pp. 275–303.

McNulty, J. K., E. S. Reynolds and S. M. Miller
1960. Ecological Effects of Sewage Pollution in Biscayne Bay, Florida: Distribution of Coliform Bacteria, Chemical Nutrients, and Volumes of Zooplankton. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 189–202.

Nash, C. B.
1947. Environmental Characteristics of a River Estuary. Journal of Marine Research, vol. 6, No. 3, pp. 147–174.

North, W. J.
1959. Studies of the Influence Which Water Clarity May Have on the Giant Kelp *Macrocystis pyrifera* and its Associated Organisms. International Oceanographic Congress (Preprints), American Association for the Advancement of Science, pp. 347–348.

North, W. J.
1963. Ecology of the Rocky Nearshore Environment in Southern California and Possible Influences of Discharged Wastes. International Journal of Air and Water Pollution, vol. 7, Nos. 6 and 7, pp. 721–736.

Odum, H. T., R. P. C. Du Rest, R. J. Beyers and C. Allbaugh
1963. Diurnal Metabolism, Total Phosphorus, Ohle Anomaly, and Zooplankton Diversity of Abnormal Marine Ecosystems of Texas. Publications of the Institute of Marine Science of the University of Texas, vol. 9, pp. 404–453.

RYTHER, J. H.
1954. The Ecology of Phytoplankton Blooms in Moriches Bay and Great South Bay, Long Island, New York. Biological Bulletin, Woods Hole, vol. 106, No. 2, pp. 198–209.

SAWYER, C. N.
1965. The Sea-Lettuce Problem in Boston Harbor. Journal of the Water Pollution Control Federation, vol. 37, No. 8, pp. 1122–1133.

TOLLEFSON, R.
1963. Basic Biological Productivity in a Marine Industrial Area. Journal of the Water Pollution Control Federation, vol. 35, No. 8, pp. 989–1005.

TOXIC ALGAE

ABBOTT, B. C. and D. BALLANTINE
1957. The Toxin from *Gymnodinium veneficum* Ballantine. Journal of the Marine Biological Association of the United Kingdom, vol. 36, No. 1, pp. 169–189.

ALDRICH, D. V. and W. B. WILSON
1960. The Effect of Salinity on Growth of *Gymnodinium breve* Davis. Biological Bulletin, Woods Hole, vol. 119, No. 1, pp. 57–63.

BALLANTINE, D.
1956. Two New Marine Species of *Gymnodinium* Isolated from the Plymouth Area. Journal of the Marine Biological Association of the United Kingdom, vol. 35, No. 3, pp. 467–474.

BARTSCH, A. F. and E. F. MCFARREN
1962. Fish Poisoning: A Problem in Food Toxication. Journal of Pacific Science, vol. 16, pp. 42–56.

BEIN, S. J.
1957. The Relationship of Total Phosphorus Concentration in Sea Water to Red Tide Blooms. Bulletin of Marine Science of the Gulf and Caribbean, vol. 7, No. 4, pp. 316–329.

BERGMANN, F., I. PARNAS and K. REICH
1963. Observations on the Mechanism of Action and on the Quantitative Assay of Ichthyotoxin from *Prymnesium parvum*. Toxicology and Applied Pharmacology, vol. 5, pp. 637–649.

CHEW, F.
1953. Results of Hydrographic and Chemical Investigations in the Region of the "Red Tide" Bloom on the West Coast of Florida in November 1952. Bulletin of Marine Science of the Gulf and Caribbean, vol. 2, No. 4, pp. 610–625.

COLLIER, A.
1958. Some Biochemical Aspects of Red Tides and Related Oceanographic Problems. Limnology and Oceanography, vol. 3, No. 1, pp. 33–39.

CONNELL, C. H. and J. B. CROSS
1950. Mass Mortality of Fish Associated with the Protozoan *Gonyaulax* in the Gulf of Mexico. Science, vol. 112, pp. 359–363.

CONOVER, S.
1954. Observations on the Structure of Red Tides in New Haven Harbor, Connecticut. Journal of Marine Research, vol. 13, No. 2, pp. 145–155.

DAVIS, C. C.
1948. *Gymnodinium brevis* sp. Nov., A Cause of Discolored Water and Animal Mortality in the Gulf of Mexico. Botanical Gazette, vol. 109, No. 3, pp. 358–360.

DRAGOVICH, A., J. H. FINUCANE and B. Z. MAY
1961. Counts of Red Tide Organisms, *Gymnodinium breve*, and Associated Oceanographic Data from Florida West Coast. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 369, pp. 1–175.

FEINSTEIN, A.
1956. Correlations of Various Ambient Phenomena with Red Tide Outbreaks on the Florida West Coast. Bulletin of Marine Science of the Gulf and Caribbean, vol. 6, No. 3, pp. 209–232.

FINUCANE, J. M. and A. DRAGOVICH
1959. Counts of Red Tide Organisms, *Gymnodinium breve*, and Associated Oceanographic Data from Florida West Coast. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 289, pp. 1–220.

FINUCANE, J. H.
1964. Distribution and Seasonal Occurrence of *Gymnodinium breve* on the West Coast of Florida. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 487, pp. 1–14.

Galtsoff, P. S.
1948. Red Tide, Progress Report on the Investigations of the Cause of Mortality of Fish Along the West Coast of Florida conducted by the U. S. Fish and Wildlife Service and Cooperating Organizations. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 46, pp. 1–44.

Gates, J. A. and W. B. Wilson
1960. The Toxicity of *Gonyaulax monilata* Howell to *Mugil cephalus.* Limnology and Oceanography, vol. 5, No. 2, pp. 171–174.

Gunter, G., R. H. Williams, C. C. Davis and F. G. W. Smith
1948. Catastrophic Mass Mortality of Marine Animals and Coincident Phytoplankton Bloom on the West Coast of Florida, November 1946 to August 1947. Ecological Monographs, vol. 18, No. 3, pp. 309–324.

Hela, I.
1955. Ecological Observations on a Locally Limited Red Tide Bloom. Bulletin of Marine Science of the Gulf and Caribbean, vol. 5, No. 4, pp. 269–291.

Howell, F. J.
1953. *Gonyaulax monilata*, sp. Nov., The Causative Dinoflagellate of a Red Tide on the East Coast of Florida in August-September, 1951. Transactions of the American Microscopical Society, vol. 72, No. 2, pp. 153–156.

Hutton, R. F.
1956. An Annotated Bibliography of Red Tides Occurring in the Marine Waters of Florida. Quarterly Journal of the Florida Academy of Science, vol. 19, Nos. 2 and 3, pp. 123–146.

Ketchum, B. H. and J. Keen
1948. Unusual Phosphorus Concentrations in the Florida "Red Tide" Sea Water. Journal of Marine Research, vol. 7, No. 1, pp. 17–21.

Kierstead, H. and L. B. Slobodkin
1953. The Size of Water Masses Containing Plankton Blooms. Journal of Marine Research, vol. 12, No. 1, pp. 141–147.

Lasker, R. and F. G. W. Smith
1954. Red Tide. In: Galtsoff, P. S., (ed.). Gulf of Mexico Its Origin, Waters, and Marine Life. U. S. Fish and Wildlife Service, Fishery Bulletin No. 89, pp. 173–176.

McFarren, E. F., M. L. Schafer, J. E. Campbell, K. H. Lewis, E. T. Jensen and E. J. Schantz
1957. Public Health Significance of Paralytic Shellfish Poison. A Review of Literature and Unpublished Research. Proceedings of the National Shellfisheries Association, vol. 47, pp. 114–141.

Medcof, J. C., A. H. Leim, A. B. Needler, A. W. H. Needler, J. Gibbard and J. Naubert
1947. Paralytic Shellfish Poisoning on the Canadian Atlantic Coast. Bulletin of the Fisheries Research Board of Canada, No. 75, pp. 1–32.

Medcof, J. C.
1960. Shellfish Posioning—Another North American Ghost. Canadian Medical Association Journal, vol. 82, No. 2, pp. 87–90.

Needler, A. B.
1949. Paralytic Shellfish Poisoning and *Goniaulax tamarensis.* Journal of the Fisheries Research Board of Canada, vol. 7, No. 8, pp. 490–504.

Odum, H. T., J. B. Lackey, J. Hynes and N. Marshall
1955. Some Red Tide Characteristics During 1952-1954. Bulletin of Marine Science of the Gulf and Caribbean, vol. 5, No. 4, pp. 247–258.

Ragotzkie, R. A. and L. R. Pomeroy
1957. Life History of a Dinoflagellate Bloom. Limnology and Oceanography, vol. 2, No. 2, pp. 62–69.

Ray, B. B., R. Johnson and J. A. Adams
1965. The Incidence of Dead and Dying Fish in the Moray Firth, September 1963. Journal of the Marine Biological Association of the United Kingdom, vol. 45, No. 1, pp. 29–47.

Ray, S. M. and W. B. Wilson
1957. The Effects of Unialgal and Bacteria-Free Cultures of *Gymnodinium brevis* on Fish and Notes on Related Studies with Bacteria. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 211, pp. 1–50.

Reish, D. J.
1963. Mass Mortality of Marine Organisms Attributed to the "Red Tide" in

Southern California. California Fish and Game, vol. 49, No. 4, pp. 265–270.

ROUNSEFELL, G. A. and J. E. EVANS

1958. Large-Scale Experimental Test of Copper Sulfate as a Control for the Florida Red Tide. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 270, pp. 1–57.

RYTHER, J. H.

1955. Ecology of Autotrophic Marine Dinoflagellates with Reference to Red Water Conditions. In: F. H. Johnson, (ed.), The Luminescence of Biological Systems. Publication of the American Association for the Advancement of Science, pp. 387–414.

SLOBODKIN, L. B.

1953. A Possible Initial Condition for Red Tides on the Coast of Florida. Journal of Marine Research, vol. 12, No. 1, pp. 148–155.

SMITH, F. G. W.

1949. Probable Fundamental Causes of Red Tide off the West Coast of Florida. Quarterly Journal of the Florida Academy of Science, vol. 11, No. 1, pp. 1–6.

SOMMER, H. and K. F. MEYER

1937. Paralytic Shellfish Poisoning. Archives of Pathology, vol. 24, No. 5, pp. 560–598.

SOMMER, H., W. F. WHEDON, C. A. KOFOID and R. STOHLER

1937. Relation of Paralytic Shellfish Poisoning to Certain Plankton Organisms of the Genus *Gonyaulax*. Archives of Pathology, vol. 24, No. 5, pp. 537–559.

SOMMER, H. and F. N. CLARK

1946. Effect of Red Water on Marine Life in Santa Monica Bay, California. California Fish and Game, vol. 32, No. 2, pp. 100–101.

TENNANT, A. D., J. NAUBERT and H. E. CORBEIL

1955. An Outbreak of Paralytic Shellfish Poisoning. Canadian Medical Association Journal, vol. 72, No. 6, pp. 436–439.

WILSON, W. B. and S. M. RAY

1956. The Occurrence of *Gymnodinium brevis* in the Western Gulf of Mexico. Ecology, vol. 37, No. 2, pp. 1–388.

YARIV, J. and S. HESTRIN

1961. Toxicity of the Extracellular Phase of *Prymnesium parvum* Cultures. Journal of General Microbiology, vol. 24, No. 2, pp. 165–175.

FUNGI

COUCH, J. N.

1942. A New Fungus on Crab Eggs. Journal of the Elisha Mitchell Scientific Society, vol. 58, No. 2, pp. 158–162.

JOHNSON, T. W. and F. K. SPARROW

1961. Fungi in Oceans and Estuaries. Hafner Publishing Company, New York, 668 pp.

MEYERS, S. P.

1954. Marine Fungi in Biscayne Bay, Florida. II. Further Studies of Occurrence and Distribution. Bulletin of Marine Science of the Gulf and Caribbean, vol. 3, No. 4, pp. 307–327.

VISHNIAC, H. S.

1960. Salt Requirements of Marine Phycomcyetes. Limnology and Oceanography, vol. 5, No. 4, pp. 362–365.

BOTTOM ORGANISMS

AMOS, W. H.

1954. Biological Survey of the Delaware River Estuary. Report of the Marine Laboratory, University of Delaware, vol. 2, pp. 21–31.

AYERS, J. C.

1956. Population Dynamics of the Marine Clam *Mya aerenaria*. Limnology and Oceanography, vol. 1, No. 1, pp. 26–34.

BANDY, O. L., J. C. INGLE, JR. and J. M. RESIG

1964. Foraminiferal Trends, Laguna Beach Outfall Area, California. Limnology and Oceanography, vol. 9, No. 1, pp. 112–123.

BANDY, O. L., J. C. INGLE, JR. and J. M. RESIG

1964. Foraminifera, Los Angeles County Outfall Area. Limnology and Oceanography, vol. 9, No. 1, pp. 124–137.

BANDY, O. L., J. C. INGLE, JR. and J. M. RESIG

1965. Foraminiferal Trends, Hyperion Outfall, California. Limnology and Oceanography, vol. 10, No. 3, pp. 314–332.

BANDY, O. L., J. C. INGLE, JR. and J. M. RESIG

1965. Modification of Foraminiferal Distribution by the Orange County Outfall Area, California. Transactions of the Marine Technological Society, pp. 54–76.

BURBANK, W. D., M. E. PIERCE and G. C. WHITELEY, JR.

1956. A Study of the Bottom Fauna of Rand's Harbor, Massachusetts: An Application of the Ecotone Concept. Ecological Monographs, vol. 26, No. 3, pp. 213–243.

DEAN, D. and H. H. HASKIN

1964. Benthic Repopulation of the Raritan River Estuary Following Pollution Abatement. Limnology and Oceanography, vol. 9, No. 4, pp. 551–563.

FILICE, F. P.

1954a. An Ecological Survey of the Castro Creek Area in San Pablo Bay. Wasmann Journal of Biology, vol. 12, pp. 1–24.

FILICE, F. P.

1954b. A Study of Some Factors Affecting the Bottom Fauna of a Portion of the San Francisco Bay Estuary. Wasmann Journal of Biology, vol. 12, pp. 257–292.

FILICE, F. P.

1958. Invertebrates from the Estuarine Portion of San Francisco Bay and Some Factors Influencing Their Distributions. The Wasmann Journal of Biology, vol. 16, pp. 159–211.

FILICE, F. P.

1959. The Effect of Wastes on the Distribution of Bottom Invertebrates in the San Francisco Bay Estuary. The Wasmann Journal of Biology, vol. 17, pp. 1–17.

HARTMAN, O.

1956. Contributions to a Biological Survey of Santa Monica Bay, California. Final Report Submitted to Hyperion Engineers, Inc., by Geology Department, University of Southern California, pp. 1–161.

HARTMAN, O.

1960. The Benthonic Fauna of Southern California in Shallow Depths and Possible Effects of Wastes on the Marine Biota. In: E. A. Pearson (ed.). Waste Disposal in the Marine Environment. Pergamon Press, New York, pp. 57–81.

HOOD, D. W., B. STEVENSON and L. M. JEFFREY

1958. Deep Sea Disposal of Industrial Wastes. Industrial and Engineering Chemistry, vol. 50, No. 6, pp. 885–888.

HUME, N. B. and C. E. GUNNERSON

1962. Characteristics and Effects of Hyperion Effluent. Journal of the Water Pollution Control Federation, vol. 34, No. 1, pp. 15–35.

MCNULTY, J. K.

1961. Ecological Effects of Sewage Pollution in Biscayne Bay, Florida: Sediments and the Distribution of Benthic and Fouling Macroorganisms. Bulletin of Marine Science of the Gulf and Caribbean, vol. 11, No. 3, pp. 394–447.

NELSON, T. C.

1960. Some Aspects of Pollution, Parasitism, and Inlet Restriction in Three New Jersey Estuaries. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 203–211.

REISH, D. J. and H. A. WINTER

1954. The Ecology of Alamitos Bay, California, with Special Reference to Pollution. California Fish and Game, vol. 40, No. 2, pp. 105–121.

REISH, D. J.

1955. The Relation of Polychaetous Annelids to Harbor Pollution. Public Health Reports, U. S. Department of Health, Education, and Welfare, vol. 70, No. 12, pp. 1168–1174.

REISH, D. J.

1956. An Ecological Study of Lower San Gabriel River, California, with Special Reference to Pollution. California Fish and Game, vol. 42, No. 1, pp. 51–61.

REISH, D. J.

1957. The Relationship of the Polychaetous Annelid *Capitella capitata* (Fabricius) to Waste Discharges of Biological Origin. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 195–200.

REISH, D. J.
1959. An Ecological Study of Pollution in Los Angeles—Long Beach Harbors, California. Allan Hancock Foundation Publications, Occasional Paper No. 22, pp. 1–19.

RESIG, J. M.
1960. Foraminiferal Ecology Around Ocean Outfalls off Southern California. In: E. A. Pearson (ed). Waste Disposal in the Marine Environment, pp. 104–121.

RITTENBERG, S. C., T. MITTWER and D. IVLER
1958. Coliform Bacteria in Sediments Around Three Marine Sewage Outfalls. Limnology and Oceanography, vol. 3, No. 1, pp. 101–108.

SANDERS, H. L.
1958. Benthic Studies in Buzzards Bay. I. Animal-Sediment Relationships. Limnology and Oceanography, vol. 3, No. 3, pp. 245–258.

SMITH, R. I.
1953. The Distribution of the Polychaete *Neanthes lighti* in the Salinas River Estuary, California. Biological Bulletin, vol. 105, No. 2, pp. 335–347.

TURNER, C. H., E. E. EBERT and R. R. GIVEN
1965. Survey of the Marine Environment Offshore of San Elijo Lagoon, San Diego County. California Fish and Game, vol. 51, No. 2, pp. 81–112.

WALDICHUCK, M. and E. L. BOUSFIELD
1962. Amphipods in Low-Oxygen Marine Waters Adjacent to a Sulphite Pulp Mill. Journal of the Fisheries Research Board of Canada, vol. 19, No. 6, pp. 1163–1165.

FISH AND SHELLFISH

BIDWELL, M. H. and C. B. KELLY
1949. A Study of Duck Farm Pollution of a Shellfish Area. Papers of the National Shellfisheries Association, pp. 78–85.

BULLER, R. J. and H. S. SPEAR
1950. Survey of the Sport Fishery of the Middle Atlantic Bight in 1948. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 7, pp. 1–20.

BURDICK, G. E.
1954. An Analysis of the Factors, Including Pollution, Having Possible Influence on the Abundance of Shad in the Hudson River. New York Fish and Game Journal, vol. 1, No. 2, pp. 188–205.

ELLIS, M. M., B. A. WESTFALL, D. K. MEYER and W. S. PLATNER
1947. Water Quality Studies of the Delaware River with Reference to Shad Migration. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 38, pp. 1–19.

FISHER, L. M.
1938. Effects of Industrial Wastes and Sewage on Shellfish and Fin Fish. Civil Engineering, vol. 8, No. 7, pp. 454–456.

GALTSOFF, P. S.
1946. Reaction of Oysters to Chlorination. U. S. Fish and Wildlife Service, Research Report No. 11, pp. 1–28.

GALTSOFF, P. S.
1964. Environmental Factors Affecting Oyster Populations. In: The American Oyster *Crassostrea virginica* Gmelin. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 64, pp. 397–456.

GLUD, J. B.
1951. The Effect of Man on Shellfish Populations. Transactions of the North American Wildlife Conference, vol. 16, pp. 397–403.

GUNTER, G. and J. MCKEE
1961. On Oysters and Sulfite Waste Liquor. Part I. Industrial Water and Wastes, vol. 6, No. 6, pp. 182–186.

GUNTER, G. and J. MCKEE
1962. On Oysters and Sulfite Waste Liquor. Part II. Industrial Water and Wastes, vol. 7, No. 1, pp. 7–9.

HALL, F. G.
1929. The Influence of Varying Oxygen Tensions Upon the Rate of Oxygen

Consumption in Marine Fishes. The American Journal of Physiology, vol. 88, pp. 212–218.

HERBERT, D. W. M. and A. C. WAKEFORD
1964. The Susceptibility of Salmonid Fish to Poisons Under Estuarine Conditions. I. Zinc Sulphate. International Journal of Air and Water Pollution, vol. 8, No. 3–4, pp. 251–256.

HOURSTON, A. S. and R. H. HERLIVEAUX
1957. A "Mass Mortality" of Fish in Alberni Harbor, British Columbia. Journal of the Fisheries Research Board of Canada, Pacific Progress Report No. 109, pp. 3–6.

KELLY, C. B., W. ARCISZ, M. W. PRESNELL and E. K. HARRIS
1960. Bacterial Accumulation by the Oyster, *Crassostrea virginica* on the Gulf Coast. U. S. Public Health Service, Robert A. Taft Sanitary Engineering Center, Technical Report F60–4, pp. 1–45.

LEBOSQUET, M., JR.
1956. Sewage Treatment Protects Shellfish Growing Areas. Proceedings of the National Shellfisheries Association, vol. 46, pp. 35–38.

MANSUETI, R. J.
1961. Effects of Civilization on Striped Bass and Other Estuarine Biota in Chesapeake Bay and Tributaries. Proceedings of the Gulf and Caribbean Fisheries Institute, 14th Annual Session, pp. 110–136.

NELSON, T. C.
1960. Some Aspects of Pollution, Parasitism, and Inlet Restrictions in Three New Jersey Estuaries. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 203–211.

PAUL, R. M.
1951. San Diego Bay Water Pollution Survey, Appendix II (pp. 67–80). Project No. 52-9-1, Department of Fish and Game. In: Report Upon the Extent, Effects and Limitations of Waste Disposal into San Diego Bay—1951. San Diego Regional Water Pollution Control Board, San Diego, California, pp. 1–95.

SYKES, J. E. and B. A. LEHMAN
1957. Past and Present Delaware River Shad Fishery and Considerations for Its Future. U. S. Fish and Wildlife Service, Research Report No. 46, pp. 1–25.

WISE, R. I., J. W. WINSTON and G. CULLI
1948. Factors of Sewage Pollution of Oyster Beds in Galveston Bay. American Journal of Public Health, vol. 38, No. 12, pp. 1109–1117.

YOUNG, P. H.
1964. Some Effects of Sewer Effluent on Marine Life. California Fish and Game, vol. 50, No. 1, pp. 33–41.

FLOWERING AQUATIC PLANTS

COTTAM, C. and D. A. MUNRO
1954. Eelgrass Status and Environmental Relations. Journal of Wildlife Management, vol. 18, No. 4, pp. 449–460.

DEXTER, R. W.
1944. Ecological Significance of the Disappearance of Eelgrass at Cape Ann, Massachusetts. Journal of Wildlife Management, vol. 8, No. 3, pp. 173–176.

NUTRIENTS

ANDERSON, D. R.
1940. Distribution of Organic Matter in Marine Sediments and Its Availability to Further Decomposition. Journal of Marine Research, vol. 2, No. 3, pp. 225–235.

ANDERSON, G. C.
1964. The Seasonal and Geographic Distribution of Primary Productivity Off the Washington and Oregon Coasts. Limnology and Oceanography, vol. 9, No. 3, pp. 284–302.

ATKINS, W. R. G.
1923. Phosphate Content of Waters in Relationship to Growth of Algal Plankton. Journal of the Marine Biological Association of the United Kingdom, vol. 13, No. 1, pp. 99–150.

Barlow, J. P., C. J. Lorenzen and R. T. Myren

1963. Eutrophication of a Tidal Estuary. Limnology and Oceanography, vol. 8, No. 2, pp. 251–262.

Bein, S. J.

1957. The Relationship of Total Phosphorus Concentrations in Sea Water to Red Tide Blooms. Bulletin of Marine Science of the Gulf and Caribbean, vol. 7, No. 4, pp. 316–329.

Burkholder, P. R. and L. M. Burkholder

1956. Vitamin B_{12} in Suspended Solids and Marsh Muds Collected Along the Coast of Georgia. Limnology and Oceanography, vol. 1, No. 3, pp. 202–208.

Conover, R. J.

1961. A Study of Charlestown and Green Hill Ponds, Rhode Island. Ecology, vol. 42, No. 1, pp. 119–140.

Cooper, L. H. N.

1941. The Rate of Liberation of Phosphates in Sea Water by Breakdown of Plankton Organisms. Journal of the Marine Biological Association of the United Kingdom, vol. 20, No. 2, pp. 197–220.

Curl, H.

1962. Effect of Divalent Sulphur and Vitamin B_{12} in Controlling the Distribution of *Skeletonema costatum*. Limnology and Oceanography, vol. 7, No. 4, pp. 422–424.

Daisley, K. W. and L. R. Fisher

1958. Vertical Distribution of Vitamin B_{12} in the Sea. Journal of the Marine Biological Association of the United Kingdom, vol. 37, No. 3, pp. 383–385.

Droop, M. R.

1957. Vitamin B-12 in Marine Ecology. Nature, vol. 180, pp. 1041–1042.

Edmondson, W. T. and Y. H. Edmondson

1947. Measurements of Production in Fertilized Sea Water. Journal of Marine Research, vol. 6, pp. 228–246.

Edmondson, W. T.

1955. Factors Affecting Productivity in Fertilized Salt Water. Papers in Marine Biology and Oceanography, Supplement to Deep Sea Research, vol. 3, pp. 451–464.

Graham, H. W., J. M. Amison and K. T. Marvin

1954. Phosphorus Content of Waters Along the West Coast of Florida. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 122, pp. 1–43.

Grill, E. V. and F. A. Richards

1964. Nutrient Regeneration from Phytoplankton Decomposing in Sea Water. Journal of Marine Research, vol. 22, No. 1, pp. 51–69.

Guillard, R. R. L. and P. J. Wangersky

1958. The Production of Extracellular Carbohydrates by Some Marine Flagellates. Limnology and Oceanography, vol. 3, No. 4, pp. 449–454.

Harris, E. and G. A. Riley

1956. Oceanography of Long Island Sound, 1952–1954. VIII. Chemical Composition of the Plankton. Bulletin of the Bingham Oceanographic Collection, vol. 15, pp. 315–323.

Harvey, H. W.

1933. On the Rate of Diatom Growth. Journal of the Marine Biological Association of the United Kingdom, vol. 19, No. 1, pp. 253–276.

Gest, H. and M. D. Kamen

1948. Studies on the Phosphorus Metabolism of Green Algae and Purple Bacteria in Relation to Photosynthesis. Journal of Biological Chemistry, vol. 176, pp. 299–318.

Hulburt, E. M.

1956. Distribution of Phosphorus in Great Pond, Massachusetts. Journal of Marine Research, vol. 15, No. 3, pp. 181–192.

Hume, N. B. and C. E. Gunnerson

1962. Characteristics and Effects of Hyperion Effluent. Journal of the Water Pollution Control Federation, vol. 34, No. 1, pp. 15–35.

Hutner, S. H.

1948. Essentiality of Constituents of Sea Water for Growth of a Marine Diatom. Transactions of the New York Academy of Science, Series No. 2, vol. 10, No. 4, pp. 136–141.

Jeffries, H. P.

1962. Environmental Characteristics of Raritan Bay, A Polluted Estuary.

Limnology and Oceanography, vol. 7, No. 1, pp. 21–31.

Johannes, R. E.
1964. Phosphorus Excretion and Body Size in Marine Animals: Microzooplankton and Nutrient Regeneration. Science, vol. 146, pp. 923–924.

Johannes, R. E.
1965. Influence of Marine Protozoa on Nutrient Regeneration. Limnology and Oceanography, vol. 10, No. 3, pp. 434–442.

Ketchum, B. H., R. F. Vaccaro and N. Corwin
1958. The Annual Cycle of Phosphorus and Nitrogen in New England Coastal Waters. Journal of Marine Research, vol. 17, No. 3, pp. 282–301.

Marriage, L. D.
1959. Relation of the Estuary to Marine Production. Proceedings of the 6th Symposium on Water Pollution Research, Department of Health, Education, and Welfare, U. S. Public Health Service, Portland, Oregon, pp. 1–33.

McNulty, J. K., E. S. Reynolds and S. M. Miller
1959. Ecological Effects of Sewage Pollution in Biscayne Bay, Florida: Distribution of Coliform Bacteria, Chemical Nutrients, and Volumes of Zooplankton. In: Transactions of the Second Seminar on Biological Problems in Water Pollution, Robert A. Taft Sanitary Engineering Center, U. S. Public Health Service, Publication No. W60–3, pp. 189–202.

Menzel, D. W. and J. P. Spaeth
1962. Occurrence of Ammonia in Sargasso Sea Waters and in Rain Water at Bermuda. Limnology and Oceanography, vol. 7, No. 2, pp. 159–162.

Munk, W. H. and G. A. Riley
1952. Absorption of Nutrients by Aquatic Plants. Journal of Marine Research, vol. 11, No. 2, pp. 215–240.

Nash, C. B.
1947. Environmental Characteristics of a River Estuary. Journal of Marine Research, vol. 6, No. 3, pp. 147–174.

Newcombe, C. L., W. A. Horne and B. B. Shepherd
1939. Studies on the Physics and Chemistry of Estuarine Waters in Chesapeake Bay. Journal of Marine Research, vol. 2, No. 2, pp. 87–116.

Newcombe, C. L. and H. F. Brust
1940. Variations in the Phosphorus Content of Estuarine Waters of the Chesapeake Bay Near Solomons Island, Maryland. Journal of Marine Research, vol. 3, No. 1, pp. 76–88.

Odum, H. T., J. B. Lackey, J. Hynes and N. Marshall
1955. Some Red Tide Characteristics During 1952–1954. Bulletin of Marine Science of the Gulf and Caribbean, vol. 5, No. 4, pp. 247–258.

Odum, H. T., R. P. Cuzon du Rest, R. J. Beyers and C. Allbaugh
1963. Diurnal Metabolism, Total Phosphorus, Ohle Anomaly, and Zooplankton Diversity of Abnormal Marine Ecosystems of Texas. Publication of the Institute of Marine Science of the University of Texas, vol. 9, pp. 404–453.

Park, K., W. T. Williams, J. M. Prescott and D. W. Hood
1962. Amino Acids in Deep-Sea Water. Science, vol. 138, pp. 531–532.

Patten, B. C. and J. R. Lacey
1961. Distribution of Ammonia Nitrogen in the Lower York River, Virginia, Spring 1961. Virginia Institute of Marine Science, Special Scientific Report, vol. 25, No. 1–3, pp. 4–13.

Pomeroy, L. R., E. E. Smith and C. M. Grant
1965. The Exchange of Phosphate Between Estuarine Water and Sediment. Limnology and Oceanography, vol. 10, No. 2, pp. 167–172.

Pratt, D. M.
1950. Experimental Study of the Phosphorus Cycle in Fertilized Salt Water. Journal of Marine Research, vol. 9, No. 1, pp. 29–54.

Rakestraw, N. W. and T. Von Brand
1947. Decomposition and Regeneration of Nitrogenous Organic Matter in Sea Water. VI. The Effect of Enzyme Poisons. Biological Bulletin, Woods Hole, vol. 92, No. 2, pp. 110–114.

REDFIELD, A. C.
1958. The Biological Control of Chemical Factors in the Environment. American Scientist, vol. 46, No. 3, pp. 205–221.

RICE, T. R.
1953. Phosphorus Exchange in Marine Phytoplankton. U. S. Fish and Wildlife Service, Fishery Bulletin 54, pp. 77–89.

RILEY, G. A.
1946. Factors Controlling Phytoplankton Populations on Georges Bank. Journal of Marine Research, vol. 6, No. 1, pp. 54–73.

RILEY, G. A.
1951. Oxygen, Phosphate, and Nitrate in the Atlantic Ocean. Bulletin of the Bingham Oceanography Collection, vol. 13, No. 1, pp. 1–126.

RYTHER, J. H. and D. D. KRAMER
1961. Relative Iron Requirement of Some Coastal and Offshore Plankton Algae. Ecology, vol. 42, No. 2, pp. 444–446.

RYTHER, J. H. and C. S. YENTSCH
1958. Primary Production of Continental Shelf Waters off New York. Limnology and Oceanography, vol. 3, No. 3, pp. 327–335.

SAWYER, C. N.
1965. The Sea-Lettuce Problem in Boston Harbor. Journal of the Water Pollution Control Federation, vol. 37, No. 8, pp. 1122–1133.

STARR, T. J.
1956. Relative Amounts of Vitamin B_{12} in Detritus from Oceanic and Estuarine Environments Near Sapelo Island, Georgia. Ecology, vol. 37, No. 4, pp. 658–664.

STEVENSON, R. E. and J. R. GRADY
1956. Plankton and Associated Nutrients in the Waters Surrounding Three Sewer Outfalls in Southern California. University of Southern California, Allan Hancock Foundation Report, pp. 1–48.

TIBBY, R. B. and J. L. BARNARD
1963. Some Physical and Biological Characteristics of Open Coastal Waters and Their Relationship to Waste Discharge. International Journal of Air and Water Pollution, vol. 7, No. 8, pp. 365–388.

VACCARO, R. F.
1963. Available Nitrogen and Phosphorus and the Biochemical Cycle in the Atlantic off New England. Journal of Marine Research, vol. 21, No. 3, pp. 284–301.

VISHNIAC, H. S. and G. A. RILEY
1961. Cobalamin and Thiamine in Long Island Sound. Patterns of Distribution and Ecological Significance. Limnology and Oceanography, vol. 6, No. 1, pp. 36–41.

WHEATLAND, A. B., M. J. BARRETT and A. M. BRUCE
1959. Some Observations on Denitrification in Rivers and Estuaries. Journal and Proceedings of the Institute of Sewage Purification, Part 2, pp. 149–159.

WILKINSON, L.
1963. Nitrogen Transformations in a Polluted Estuary. International Journal of Air and Water Pollution, vol. 7, No. 6, pp. 737–752.

YENTSCH, C. S. and R. F. VACCARO
1958. Phytoplankton Nitrogen in the Oceans. Limnology and Oceanography, vol. 3, No. 4, pp. 443–448.

YOUNG, E. G. and W. M. LANGILLE
1958. The Occurrence of Inorganic Elements in Marine Algae of the Atlantic Provinces of Canada. Canadian Journal of Botany, vol. 36, No. 3, pp. 301–310.

RECREATIONAL WATERS

LEVINE, M., H. MINETTE and R. H. TANIMOTO
1960. Characteristics and Expeditious Detection of Bacterial Indices of Pollution of Marine Bathing Beaches. In: Pearson, E. A. (ed.), Proceedings of the First International Conference on Waste Disposal in the Marine Environment, Berkeley, California, 1959. Pergamon Press Inc., New York, pp. 12–28.

Moore, B.
1954. Sewage Contamination of Coastal Bathing Beaches. Bulletin of Hygiene, vol. 29, pp. 689–704.

Pearson, E. A., R. D. Pomeroy and J. E. McKee
1960. Summary of Marine Waste Disposal Research Program in California. California State Water Pollution Control Board, Publication No. 22, pp. 1–77.

Sindermann, C. J. and R. F. Gibbs
1953. A Dermatitis-Producing Schistosome which Causes "Clam Diggers" Itch Along the Central Maine Coast. Maine Department of Sea Fisheries, Bulletin No. 12, pp. 1–20.

Sindermann, C. J.
1956. The Ecology of Marine Dermatitis-Producing Schistosomes. I. Seasonal Variation in Infection of Mud Snails *Nassa obsoleta* by Larvae of *Austrobilharzia variglandis*. Journal of Parasitology, Section 2, vol. 42, No. 4, pp. 1–27.

Sindermann, C., A. Rosenfield and L. Strom
1957. The Ecology of Marine Dermatitis-Producing Schistosomes. II. Effects of Certain Environmental Factors on Emergence of Cercariae of *Austrobilharzia variglandis*, Nassarius. Journal of Parasitology, vol. 43, No. 3, p. 382.

Sindermann, C. and A. Rosenfield
1957. The Ecology of Marine Dermatitis - Producing Schistosomes. III. Oxygen Consumption of Normal and Parasitized *Nassarius obsoletus* (Nassa obsoleta) Under Varying Conditions of Salinity. Journal of Parasitology, Section 2, vol. 43, No. 5, pp. 1–28.

Stunkard, H. W.
1951. Causative Agents of Swimmer's Itch in Narragansett Bay, Rhode Island. Journal of Parasitology, Section 2, vol. 37, No. 5, pp. 26–27.

Winslow, C. and D. Moxon
1928. Bacterial Pollution of Bathing Beach Waters in New Haven Harbor. American Journal of Hygiene, vol. 8, pp. 299–310.

PESTICIDES AND THEIR EFFECT UPON AQUATIC LIFE

Boyd, C. E.
1964. Insecticides Cause Mosquitofish to Abort. Progressive Fish Culturist, vol. 26, No. 3, pp. 1–138.

Butler, P. A., A. J. Wilson and A. J. Rick
1960. Effect of Pesticides on Oysters. Proceedings of the National Shellfisheries Association, vol. 51, pp. 123–132.

Butler, P. A.
1961. Effects of Pesticides on Commercial Fisheries. Proceedings of the Gulf and Caribbean Fisheries Institute, vol. 13, pp. 168–172.

Butler, P. A. and P. F. Sringer
1963. Pesticides—A New Factor in Coastal Environments. Transactions of the North American Wildlife Conference, vol. 28, pp. 378–390.

Chin, E. and D. M. Allen
1957. Toxicity of an Insecticide to Two Species of Shrimp, *Penaeus aztecus* and *Penaeus setiferus*. Texas Journal of Science, vol. 9, No. 3, pp. 270–278.

Croker, R. A. and A. J. Wilson
1965. Kinetics and Effects of DDT in a Tidal Marsh Ditch. Transactions of the American Fisheries Society, vol. 94, No. 2, pp. 152–159.

Darsie, R. F., Jr. and F. E. Corriden
1959. The Toxicity of Malathion to Killifish (Cyprinodontidae) in Delaware. Journal of Economic Entomology, vol. 52, No. 4, pp. 696–700.

George, J. L., R. F. Darsie and P. F. Springer
1957. Effects on Wildlife of Aerial Applications of Strobane, DDT, and BHC to Tidal Marshes in Delaware. Journal of Wildlife Management, vol. 21, No. 1, pp. 42–53.

Harrington, R. W., Jr. and W. L. Bidlingmayer
1958. Effects of Dieldrin on Fishes and Invertebrates of a Salt Marsh. Journal of Wildlife Management, vol. 22, No. 1, pp. 76–82.

Janzen, D. H.
1960. The Effects of Pesticides on Sport Fisheries. Proceedings of the Gulf and Caribbean Fisheries Institute, vol. 12, pp. 50–55.

Lowe, J. I.
1964. Chronic Exposure of Spot, *Leiostomus xanthurus*, to Sublethal Concentrations of Toxaphene in Sea Water. Transactions of the American Fisheries Society, vol. 93, No. 4, pp. 396–399.

Lowe, J. I.
1965. Chronic Exposure of Blue Crabs, *Callinectes sapidus*, to Sublethal Concentrations of DDT. Ecology, vol. 46, No. 6, pp. 899–900.

Nelson, A. L. and E. W. Surber
1947. DDT Investigations by the Fish and Wildlife Service in 1946. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 41, pp. 1–8.

Nelson, T. C.
1960. Some Aspects of Pollution, Parasitism, and Inlet Restriction in Three New Jersey Estuaries. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 203–211.

Richards, A. G. and L. K. Cutkomp
1946. Correlation Between the Possession of a Chitinous Cuticle and Sensitivity to DDT. Biological Bulletin, Woods Hole, vol. 90, No. 2, pp. 97–108.

Ruber, E.
1963. The Effects of Certain Mosquito Larvicides on Microcrustacean Populations. Proceedings of the Annual Meeting of the New Jersey Mosquito Exterminators Association, vol. 50, pp. 256–263.

Springer, P. F. and J. R. Webster
1951. Biological Effects of DDT Application on Tidal Salt Marshes. Mosquito News, vol. 11, No. 2, pp. 67–74.

Springer, P. F. and J. R. Webster
1951. Biological Effects of DDT Application on Tidal Salt Marshes. Transactions of the North American Wildlife Conference, vol. 16, pp. 383–397.

Springer, P. F. and J. R. Webster
1951. Effects of DDT on Saltmarsh Wildlife: 1949. U. S. Fish and Wildlife Service, Special Scientific Reports, Wildlife No. 10, pp. 1–24.

Tiller, R. E. and E. N. Cory
1947. Effects of DDT on Some Tidewater Aquatic Animals. Journal of Economic Entomology, vol. 40, No. 3, pp. 431–433.

Ukeles, R.
1960. Effects of Several Toxicants on Five Genera of Marine Phytoplankton. Effects of Pesticides on Fish and Wildlife: A Review of Investigations During 1960. U. S. Fish and Wildlife Service Circular No. 143, pp. 1–21.

Weiss, C. M.
1959. Response of Fish to Sub-Lethal Exposures of Organic Phosphorus Insecticides. Sewage and Industrial Wastes, vol. 31, No. 5, pp. 580–593.

Werner, A. E. and M. Waldichuk
1961. Decay of Hexachlorocyclohexane in Sea Water. Journal of the Fisheries Research Board of Canada, vol. 18, No. 2, pp. 287–289.

ENVIRONMENT CHANGE AND ITS EFFECT UPON AQUATIC LIFE

Andrews, J. D., D. Haven and D. B. Quayle
1959. Fresh-water Kill of Oysters *(Crassostrea virginica)* in James River, Virginia, 1958. Proceedings of the National Shellfisheries Association, vol. 49, No. 1, pp. 29–49.

Bourn, W. S. and C. Cottam
1950. Some Biological Effects of Ditching Tidewater Marshes. U. S. Fish and Wildlife Service, Special Scientific Reports, Research No. 19, pp. 1–30.

Butler, P. A.
1952. Effect of Floodwaters on Oysters in Mississippi Sound in 1950. U. S. Fish and Wildlife Service, Special Scientific Reports, Research No. 31, pp. 1–20.

COFFEY, P. J., W. R. SLATER and C. A. MCCULLOUGH

1955. Water Quality and Waste Disposal. Appendix F of Report to the Water Project Authority of the State of California on Feasibility of Construction by the State of Barriers in the San Francisco Bay System. Division of Water Resources, Department of Public Works, State of California, pp. 1–71.

COLTON, J. B., JR.

1959. A Field Observation of Mortality of Marine Fish Larvae Due to Warming. Limnology and Oceanography, vol. 4, No. 2, pp. 219–222.

CURL, H., JR.

1957. Changes in Bottom Topography off Alligator Harbor Since 1889. Quarterly Journal of the Florida Academy of Science, vol. 20, No. 3, pp. 205–208.

DAIBER, F. C.

1959. Tidal Marsh, Conflicts and Interactions. Estuarine Bulletin, vol. 4, No. 1, pp. 4–16.

DICKIE, L. M. and J. C. MEDCOF

1963. Causes of Mass Mortalities of Scallops *(Placopecten magellanicus)* in the Southwestern Gulf of St. Lawrence. Journal of the Fisheries Research Board of Canada, vol. 20, No. 2, pp. 451–482.

DOW, R. L.

1959. Investigations of Past, Present, and Possible Future Status of Fish and Shellfish Species in the United States Area Affected by the Passamaquoddy Power Project. In: Appendix III, Biology—United States. International Passamaquoddy Fisheries Board, Report to International Joint Commission, Ottawa, Ontario, and Washington, D. C., pp. 1–103.

HOESE, H. D.

1960. Biotic Changes in a Bay Associated with the End of a Drought. Limnology and Oceanography, vol. 5, No. 3, pp. 326–336.

INGLE, R. M.

1952. Studies on the Effect of Dredging Operations upon Fish and Shellfish. Florida Board of Conservation, Technical Series 5, pp. 1–25.

KERSWILL, C. J.

1959. Effects of Proposed Passamaquoddy Power Project on Anadromous Fishes in Canadian Waters. In: Appendix II, Studies in Fisheries Biology for the Passamaquoddy Power Project. International Passamaquoddy Fisheries Board, Report to International Joint Commission, Ottawa, Ontario, and Washington, D. C., pp. 1–8.

MARTIN, W. R.

1960. Predicted Effects of Proposed Tidal Power Structures on Groundfish Catches in Charlotte County, N. B. Journal of the Fisheries Research Board of Canada, vol. 17, No. 2, pp. 169–173.

NELSON, T. C.

1960. Some Aspects of Pollution, Parasitism, and Inlet Restriction in Three New Jersey Estuaries. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, U. S. Public Health Service, Cincinnati, Ohio, pp. 203–211.

ODUM, H. T.

1963. Productivity Measurements in Texas Turtle Grass and the Effects of Dredging an Intracoastal Channel. Publications of the Institute of Marine Science of the University of Texas, vol. 9, pp. 48–58.

OPPENHEIMER, C. H.

1963. Effects of Huricane Carla on the Ecology of Redfish Bay, Texas. Bulletin of Marine Science of the Gulf and Caribbean, vol. 13, No. 1, pp. 59–72.

PELGEN, D. E.

1955. The Effect of a San Francisco Salinity Control Barrier on Fisheries and Wildlife. Fish and Wildlife Appendix C of Report to the Water Project Authority of the State of California on Feasibility of Construction by the State of Barriers in the San Francisco Bay System, Division of Water Resources, Department of Public Works, State of California, pp. 1–53.

PERLMUTTER, A.

1959. Our Changing Shoreline. New York State Conservationist, pp. 12–15.

PHILLIPS, R. C.
1960. Ecology and Distribution of Marine Algae Found in Tampa Bay, Boca Ciega Bay and at Tarpon Springs, Florida. Quarterly Journal of the Florida Academy of Science, vol. 23, No. 3, pp. 222–260.

PHILLIPS, R. C.
1960. Observations on the Ecology and Distribution of the Florida Seagrasses. Florida State Board of Conservation, Technical Series 2, pp. 1–72.

RILEY, G. A.
1937. The Significance of the Mississippi River Drainage for Biological Conditions in the Northern Gulf of Mexico. Journal of Marine Research, vol. 1, No. 1, pp. 60–74.

SCHULTZ, E. A. and H. B. SIMMONS
1957. Fresh Water-Salt Water Density Currents, a Major Cause of Siltation in Estuaries. Nineteenth Navigational Congress, London, England—1957, Paper S–II, C–3, pp. 1–20.

SCHWARTZ, F. J.
1964. Effects of Winter Water Conditions on Fifteen Species of Captive Marine Fishes. American Midland Naturalist, vol. 71, No. 2, pp. 434–444.

SIMMONS, E. G.
1957. An Ecological Survey of the Upper Laguna Madre of Texas. Publications of the Institute of Marine Science of the University of Texas, vol. 4, No. 2, pp. 156–200.

SOLOMON, C. H.
1965. Bait Shrimp *(Penaeus duorarum)* in Tampa Bay, Florida—Biology, Fishery Economics, and Changing Habitat. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 520, pp. 1–16.

STAUFFER, R. C.
1937. Changes in the Invertebrate Community of a Lagoon after Disappearance of the Eelgrass. Ecology, vol. 18, No. 3, pp. 427–431.

TABB, D. C. and A. C. JONES
1962. Effect of Hurricane Donna on the Aquatic Fauna of North Florida Bay. Transactions of the American Fisheries Society, vol. 91, No. 4, pp. 375–378.

ZETLER, B. D.
1953. Some Effects of the Diversion of the Santee River on the Waters of Charleston Harbor. Transactions of the American Geophysical Union, vol. 34, No. 5, pp. 729–732.

RADIOACTIVITY AND ITS EFFECT UPON AQUATIC LIFE

BAPTIST, J. P. and T. J. PRICE
1962. Accumulation and Retention of Cesium^{137} by Marine Fishes. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries No. 62, pp. 177–187.

BOROUGHS, H., W. A. CHIPMAN and T. R. RICE
1957. Laboratory Experiments on the Uptake, Accumulation, and Loss of Radionuclides by Marine Organisms. In: The Effects of Atomic Radiation on Oceanography and Fisheries. National Academy of Science, National Research Council, Publication No. 551, pp. 80–87.

BOWEN, H. J. M.
1956. Strontium and Barium in Sea Water and Marine Organisms. Journal of the Marine Biological Association of the United Kingdom, vol. 35, No. 3, pp. 451–460.

BRYAN, G. W.
1963. The Accumulation of Caesium-137 by Brackish-Water Invertebrates and Its Relation to the Regulation of Potassium and Sodium. Journal of the Marine Biological Association of the United Kingdom, vol. 43, No. 3, pp. 541–565.

BRYAN, G. W.
1963. The Accumulation of Radioactive Caesium by Marine Invertebrates. Journal of the Marine Biological Association of the United Kingdom, vol. 43, No. 3, pp. 519–539.

CARRITT, D. E.
1960. Disposal into the Sea and into Geological Structures of Wastes Resulting from the Peaceful Uses of Atomic Energy. Disposal of Radioactive Wastes, vol. 2, Conference Proceedings, Monaco, November 16–21, 1959, pp. 259–264.

CARRITT, D. E. and J. H. HARLEY

1957. Precipitation of Fission Product Elements on the Ocean Bottom by Physical, Chemical, and Biological Processes. In: The Effects of Atomic Radiation on Oceanography and Fisheries. National Academy of Science, National Research Council, Publication No. 551, pp. 60–68.

CARRITT, D. E.

1959. Radioactive Waste Disposal into Atlantic and Gulf Coast Waters. National Academy of Science, National Research Council, Publication No. 655, pp. 1–37.

CHIPMAN, W. A., T. R. RICE and T. J. PRICE

1958. Uptake and Accumulation of Radioactive Zinc by Marine Plankton, Fish, and Shellfish. U. S. Fish and Wildlife Service, Fisheries Bulletin No. 135, pp. 279–292.

CHIPMAN, W. A.

1958. Biological Accumulation of Radioactive Materials. First Texas Conference on Uses of Atomic Energy, Special Publication of Agricultural and Mechanical College of Texas, College Station, Texas, pp. 36–41.

CHIPMAN, W. A.

1959. Accumulation of Radioactive Materials by Fishery Organisms. Proceedings of the Gulf and Caribbean Fisheries Institute, vol. 11, pp. 97–110, 115.

CHIPMAN, W. A.

1959. Disposal of Radioactive Materials and Its Relation to Fisheries. Proceedings of the National Shellfisheries Association, vol. 49, No. 1, pp. 5–12.

CHIPMAN, W. A.

1959. Accumulation of Radioactive Pollutants by Marine Organisms and Its Relation to Fisheries. In: Biological Problems in Water Pollution—Transactions of the 2nd Seminar, Robert A. Taft Sanitary Engineering Center, Publication No. W60–3, pp. 8–14.

DEXTER, R. W.

1962. Studies on Marine Food Chains which could Introduce Radioactive Materials to Man, and on Annual Changes in Certain Natural Populations. Final Report. U. S. Atomic Energy Commission, TID–17907, pp. 1–14.

DONALDSON, L. R. and R. F. FOSTER

1957. Effects of Radiation on Aquatic Organisms. In: The Effects of Atomic Radiation on Oceanography and Fisheries. National Academy of Science, National Research Council, Publication No. 551, pp. 96–102.

FITZGERALD, B. W. and D. M. SKAUEN

1963. Zinc-65 in Oysters in Fishers Island Sound and its Estuaries. In: Radioecology. Reinhold Publishing Corporation, New York, pp. 159–162.

GORBMAN, A. and M. S. JAMES

1963. An Exploratory Study of Radiation Damage in the Thyroids of Coral Reef Fishes from the Eniwetok Atoll. In: Radioecology. Reinhold Publishing Corporation, New York, pp. 385–399.

GUTKNECHT, J.

1961. Mechanism of Radioactive Zinc Uptake by *Ulva lactuca*. Limnology and Oceanography, vol. 6, No. 4, pp. 426–431.

GUTKNECHT, J.

1965. Uptake and Retention of Cesium-137 and Zinc-65 by Seaweeds. Limnology and Oceanography, vol. 10, No. 1, pp. 58–66.

HATFIELD, T. W., D. M. SKAUEN and J. S. RANKIN, JR.

1963. Gross Beta Radioactivity in Marine Organisms. In: Radioecology. Reinhold Publishing Corporation, New York, pp. 141–143.

HIGGINS, E.

1951. Atomic Radiation Hazards for Fish. Journal of Wildlife Management, vol. 15, No. 1, pp. 1–12.

HOSS, D. E.

1964. Accumulation of Zinc-65 by Flounder of the Genus *Paralichthys*. Transactions of the American Fisheries Society, vol. 93, No. 4, pp. 364–368.

JAFFE, G. and J. H. HUGHES

1953. The Radioactivity of Bottom Sediments in Chesapeake Bay. Transactions of the American Geophysical Union, vol. 34, No. 4, pp. 539–542.

JONES, R. F.

1960. The Accumulation of Nitrosyl Ruthenium by Fine Particles and Marine Organisms. Limnology and Oceanography, vol. 5, No. 3, pp. 312–325.

Ketchum, B. H. and V. T. Bowen
1958. Biological Factors Determining the Distribution of Radioisotopes in the Sea. Proceedings of the International Conference on Peaceful Uses of Atomic Energy, No. 18, pp. 429–433.

Ketchum, B. H.
1960. Oceanographic Research Required in Support of Radioactive Waste Disposal. Disposal of Radioactive Wastes, vol. 2, Conference Proceedings, Monaco, November 16–21, 1959, pp. 283–291.

Krumholz, L. A., E. D. Goldberg and H. Boroughs
1957. Ecological Factors Involved in the Uptake, Accumulation, and Loss of Radionuclides by Aquatic Organisms. In: The Effects of Atomic Radiation on Oceanography and Fisheries, National Academy of Science, National Research Council, Publication No. 551, pp. 69–79.

Krumholz, L. A. and R. F. Foster
1957. Accumulation and Retention of Radioactivity from Fission Products and Other Radiomaterials by Fresh-Water Organisms. In: The Effects of Atomic Radiation on Oceanography and Fisheries. National Academy of Science, National Research Council, Publication No. 551, pp. 88–95.

National Research Council
1962. Disposal of Low-Level Radioactive Waste into Pacific Coastal Waters. National Academy of Science, National Research Council, Publication No. 985, pp. 1–100.

Mauchline, J. and A. M. Taylor
1964. The Accumulation of Radionuclides by the Thornback Ray, *Raia clavata* L., in the Irish Sea. Limnology and Oceanography, vol. 9, No. 3, pp. 303–309.

Mauchline, J. and W. L. Templeton
1963. Dispersion in the Irish Sea of the Radioactive Liquid Effluent from Windscale Works of the U. K. Atomic Energy Authority. Nature, vol. 198, pp. 623–626.

Osterberg, C., J. Pattullo and W. Pearcy
1964. Zinc 65 in Euphausiids as Related to Columbia River Water off the Oregon Coast. Limnology and Oceanography, vol. 9, No. 2, pp. 249–257.

Osterberg, C., W. G. Pearcy and H. Curl
1964. Radioactivity and Its Relationship to Oceanic Food Chains. Journal of Marine Research, vol. 22, No. 1, pp. 2–12.

Pearcy, W. G. and C. L. Osterberg
1964. Vertical Distribution of Radionuclides as Measured in Oceanic Animals. Nature, vol. 204, pp. 440–441.

Price, T. J.
1962. Accumulation of Radionuclides and the Effects of Radiation on Molluscs. In: Biological Problems in Water Pollution—Transactions of the 3rd Seminar, Robert A. Taft Sanitary Engineering Center. Public Health Service Publication No. 999–WP–25, pp. 202–210.

Pritchard, D. W.
1960. Problems Related to Disposal of Radioactive Wastes in Estuarine and Coastal Waters. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 22–32.

Ray, K. M. (ed.)
1962. Oceanographic Studies During Operation "Wigwam." Limnology and Oceanography, Supplement to Volume 7, pp. 1–91.

Revelle, R. and M. B. Schaefer
1957. General Considerations Concerning the Ocean as a Receptacle for Artificially Radioactive Materials. National Academy of Science. National Research Council, Publication No. 511, pp. 1–25.

Revelle, R. and M. B. Schaefer
1958. Oceanic Research Needed for Safe Disposal of Radioactive Wastes at Sea. Proceedings 2nd International Conference on Peaceful Uses of Atomic Energy, June 1958, Session D–19, P/2431, pp. 364–370.

Rice, T. R.
1956. The Accumulation and Exchange of Strontium by Marine Plankton Algae. Limnology and Oceanography, vol. 1, No. 2, pp. 123–138.

Rice, T. R. and V. M. Willis

1959. Uptake, Accumulation and Loss of Radioactive Cerium-144 by Marine Planktonic Algae. Limnology and Oceanography, vol. 4, No. 3, pp. 277–290.

Sabo, J. J. and P. H. Bedrosian *(Editors)*

1963. Studies of the Fate of Certain Radionuclides in Estuariane and Other Aquatic Environments. U. S. Public Health Service Publication No. 999–R–3, p. 1–73.

Schaefer, M. B.

1960. New Research Required in Support of Radioactive Waste Disposal. Disposal of Radioactive Wastes, vol. 2, Conference Proceedings, Monaco, November 16–21, 1959, pp. 265–282.

Seymour, A. H.

1963. Radioactivity of Marine Organisms from Guam, Palau and the Gulf of Siam, 1958–1959. In: Radioecology. Reinhold Publishing Corporation, New York, pp. 151–157.

Skauen, D. M.

1963. Radioactive Zinc-65 in Marine Organisms in Fisher's Island Sound and Its Estuaries. Final Report, December 1, 1959 through November 30, 1963. U. S. Atomic Energy Commission, TID–19922, pp. 1–52.

Taylor, W. R.

1960. Some Results of Studies on the Uptake of Radioactive Waste Materials by Marine and Estuarine Phytoplankton Organisms Using Continuous Culture Techniques. Chesapeake Bay Institute, Technical Report, No. 21, pp. 1–49.

Townsley, S. J., R. E. Johannes and B. T. Sather

1962. The Accumulation of Radioactive Isotopes by Tropical Marine Organisms. Annual Report, 1961–1962. U. S. Atomic Energy Commission, TID–19104, pp. 1–52.

Watson, D. G., J. J. Davis and W. C. Hanson

1961. Zinc-65 in Marine Organisms Along the Oregon and Washington Coasts. Science, vol. 133, pp. 1826–1828.

Watson, D. G., J. J. Davis and W. C. Hanson

1963. Interspecies Differences in Accumulation of Gamma Emitters by Marine Organisms near the Columbia River Mouth. Limnology and Oceanography, vol. 8, No. 2, pp. 305–308.

TOXICITY AND BIO-ASSAY METHODS

Alderdice, D. F.

1963. Some Effects of Simultaneous Variation in Salinity, Temperature and Dissolved Oxygen on the Resistance of Young Coho Salmon to a Toxic Substance. Journal of the Fisheries Research Board of Canada, vol. 20, No. 2, pp. 525–550.

Beaver, G. F., C. K. Rawls and G. E. Beckett

1962. Field Observations upon Estuarine Animals Exposed to 2,4–D. Proceedings of the Northeast Weed Control Conference, No. 16, pp. 449–458.

Bergman, F., I. Parnas and K. Reich

1963. Observations on the Mechanism of Action and on the Quantitative Assay of Ichthyotoxin from *Prymnesium parvum*. Toxicology and Applied Pharmacology, vol. 5, pp. 637–649.

Chadwick, H. K.

1960. Toxicity of Tricon Oil Spill Eradicator to Striped Bass *Roccus sexatilis*. California Fish and Game, vol. 46, No. 3, pp. 371–372.

Chanin, G. and P. Dempster

1958. A Complex Chemical Waste and Its Toxicity to Fish. Industrial Wastes, vol. 3, No. 6, pp. 155–158.

Collier, A., S. Ray, W. Magnitzky and J. O. Bell

1953. Effect of Dissolved Organic Substances on Oysters. U. S. Fish and Wildlife Service, Fishery Bulletin, vol. 54, No. 84, pp. 167–185.

Cooper, R. A., S. B. Chenoweth and N. Marshall

1964. Condition of the Quahog, *Mercenaria mercenaria*, from Polluted and Unpolluted Waters. Chesapeake Science, vol. 5, No. 4, pp. 155–160.

DAUGHERTY, F. M., JR.
1951. A Proposed Toxicity Test for Industrial Wastes to be Discharged to Marine Waters. Sewage and Industrial Wastes, vol. 23, No. 8, pp. 1029–1031.

DAUGHERTY, F. M., JR.
1951. Effects of Some Chemicals Used in Oil Well Drilling on Marine Animals. Sewage and Industrial Wastes, vol. 23, No. 10, pp. 1282–1287.

DAVIS, C. C.
1948. Studies of the Effects of Industrial Pollution in the Lower Patapsco River Area. 2. The Effect of Copperas Pollution on Plankton. Publications of the Chesapeake Biological Laboratory, vol. 72, No. 1, pp. 1–12.

DAVIS, H. C. and P. E. CHANLEY
1956. Effects of Some Dissolved Substances on Bivalve Larvae. Proceedings of the National Shellfisheries Association, vol. 46, pp. 59–74.

EISLER, R.
1965. Some Effects of a Synthetic Detergent on Estuarine Fishes. Transactions of the American Fisheries Society, vol. 94, No. 1, pp. 26–31.

GALTSOFF, P. S.
1932. Effects of Pulp Mill Pollution on Oysters. II. The Effect of Sulphite Waste Liquor on the Rate of Feeding of *Ostrea lurida* and *Ostrea gigas*. In: Hopkins, et al., Effects of Pulp Mill Pollution on Oysters. U. S. Bureau of Fisheries Bulletin, vol. 47, No. 6, pp. 162–167.

GALTSOFF, P. S.
1946. Reaction of Oysters to Chlorination. U. S. Fish and Wildlife Service, Special Scientific Reports, Research No. 11, pp. 1–28.

GALTSOFF, P. S., W. A. CHIPMAN, JR., J. B. ENGLE and H. N. CALDERWOOD
1947. Ecological and Physiological Studies of the Effect of Sulfate Pulp Mill Wastes on Oysters in the York River, Virginia. U. S. Fish and Wildlife Service, Fishery Bulletin, vol. 51, No. 43, pp. 59–186.

GATES, J. A. and W. B. WILSON
1960. The Toxicity of *Gonyaulax monilata* Howell to *Mugil cephalus*. Limnology and Oceanography, vol. 5, No. 2, pp. 171–174.

HAYDU, E. P., H. R. AMBERG and R. E. DIMICK
1953. The Lethality of Methyl Mercaptan to King Salmon as Influenced by Variation of the Volume of Test Solution. Technical Association of the Pulp and Paper Industry, vol. 36, No. 3, pp. 131–133.

HENDERSON, W. L.
1959. Studies on the Use of Membrane Filters for the Estimation of Coliform Densities in Sea Water. Sewage and Industrial Wastes, vol. 31, No. 1, pp. 78–91.

HERBERT, D. W. M. and A. C. WAKEFORD
1964. The Susceptibility of Salmonid Fish to Poisons Under Estuarine Conditions—I. Zinc Sulphate. International Journal of Air and Water Pollution, vol. 8, Nos. 3 and 4, pp. 251–256.

HOOD, D. W., T. W. DUKE and B. STEVENSON
1960. Measurement of Toxicity of Organic Wastes to Marine Organisms. Journal of the Water Pollution Control Federation, vol. 32, No. 9, pp. 982–993.

LINDSAY, C. E.
1960. The Bio-assay Approach to Estuarine Pollution Problems. Journal of the Water Pollution Control Federation, vol. 32, No. 2, pp. 195–197.

LOWE, J. I.
1965. Chronic Exposure of Blue Crabs, *Callinectes sapidus*, to Sublethal Concentrations of DDT. Ecology, vol. 46, No. 6, pp. 899–900.

MACKIN, J. G.
1961. Mortalities of Oysters. Proceedings of the National Shellfisheries Association, vol. 50, pp. 21–40.

MARVIN, K. T., L. M. LANSFORD and R. S. WHEELER
1961. Effects of Copper Ore on the Ecology of a Lagoon. U. S. Fish and Wildlife Service, Fishery Bulletin No. 184, pp. 153–160.

NELSON, T. C.
1921. Some Aspects of Pollution as Affecting Oyster Propagation. American Journal of Public Health, vol. 11, No. 6, pp. 498–501.

PEARSON, E. A., R. D. POMEROY and J. E. MCKEE

1960. Summary of Marine Waste Disposal Research Program in California. State Water Pollution Control Board, Sacramento, California, Publication No. 22, pp. 1–77.

PULLEY, T. E.

1950. The Effect of Aluminum Chloride in Small Concentrations on Various Marine Organisms. Texas Journal of Science, vol. 2, No. 3, pp. 405–411.

RAWLS, C. K.

1965. Field Tests of Herbicide Toxicity to Certain Estuarine Animals. Chesapeake Science, vol. 6, No. 3, pp. 150–161.

RAYMONT, J. E. G. and J. SHIELDS

1963. Toxicity of Copper and Chromium in the Marine Environment. International Journal of Air and Water Pollution, vol. 7, Nos. 4 and 5, pp. 435–443.

REISH, D. J. and J. L. BARNARD

1960. Field Toxicity Tests in Marine Waters Utilizing the Polychaetous Annelid, *Capitella capitata* (Frabicius). Pacific Naturalist, vol. 1, No. 21, pp. 1–8.

RITCHIE, L. S., I. FOX, L. P. FRICK and L. A. BERRIES-DURAN

1963. Molluskicidal Qualities of Dinex (dinitro-*o*-cyclohexylphenol) Revealed by 6-Hour and 24-Hour Exposures Against Representative Stages and Sizes of *Australorbis glabratus*. Bulletin of the World Health Organization, vol. 29, No. 4, pp. 545–548.

STARR, T. J. and M. E. JONES

1957. The Effect of Copper on the Growth of Bacteria Isolated from Marine Environments. Limnology and Oceanography, vol. 2, No. 1, pp. 33–36.

TAGATZ, M. E.

1961. Reduced Oxygen Tolerance and Toxicity of Petroleum Products to Juvenile American Shad. Chesapeake Science, vol. 2, Nos. 1 and 2, pp. 65–71.

UKELES, R.

1962. Growth of Pure Cultures of Marine Phytoplankton in the Presence of Toxicants. Applied Microbiology, vol. 10, No. 6, pp. 532–537.

WAUGH, G. D.

1964. Observations on the Effects of Chlorine on the Larvae of Oysters (*Ostrea edulis* L.) and Barnacles (*Elminius modestus* Darwin). Annals of Applied Biology, vol. 54, No. 3, pp. 423–440.

YOUNG, P. H.

1964. Some Effects of Sewer Effluent on Marine Life. California Fish and Game, vol. 50, No. 1, pp. 33–41.

TECHNIQUES

BARNARD, J. L. and G. F. JONES

1960. Techniques in a Large Scale Survey of Marine Benthic Biology. In: Pearson, E. A. (ed.), Disposal of Wastes in the Marine Environment. Pergamon Press, New York, pp. 413–447.

BUCK, J. D. and R. C. CLEVERDON

1960. The Spread Plate as a Method for the Enumeration of Marine Bacteria. Limnology and Oceanography, vol. 5, No. 1, pp. 78–80.

BUCK, J. D. and R. C. CLEVERDON

1961. The Effect of Tween 80 on the Enumeration of Marine Bacteria by the Spread and Pour Plate Methods. Limnology and Oceanography, vol. 6, No. 1, pp. 42–44.

BURT, W. V. and L. D. MARRIAGE

1957. Computation of Pollution in the Yaquina River Estuary. Sewage and Industrial Wastes, vol. 29, No. 12, pp. 1385–1389.

CLARK, J. R. and R. L. CLARK

1964. Sea-Water Systems for Experimental Aquariums. U. S. Fish and Wildlife Service, Research Report, Fisheries No. 63, pp. 1–192.

DODSON, A. N. and W. H. THOMAS

1964. Concentrating Plankton in a Gentle Fashion. Limnology and Oceanography, vol. 9, No. 3, pp. 455–456.

HOHN, M. H.

1959. The Use of Diatom Populations as a Measure of Water Quality in Selected Areas of Galveston and Chocolate Bay, Texas. Publications of the Institute of Marine Science of the University of Texas, vol. 6, pp. 206–212.

Holmes, R. W.
1962. The Preparation of Marine Phytoplankton for Microscopic Examination and Enumeration on Molecular Filters. U. S. Fish and Wildlife Service, Special Scientific Report No. 433, pp. 1–6.

Jannasch, H. W. and G. E. Jones
1959. Bacterial Populations in Sea Water as Determined by Different Methods of Enumeration. Limnology and Oceanography, vol. 4, No. 2, pp. 128–139.

Johnson, M. C.
1954. A Suggested Inorganic Fertilizer for Use in Brackish Water. Quarterly Journal of the Florida Academy of Science, vol. 17, No. 2, pp. 119–127.

Kutkuhn, J. H.
1958. Notes on the Precision of Numerical and Volumetric Plankton Estimates from Small-Sample Concentrates. Limnology and Oceanography, vol. 3, No. 1, pp. 69–83.

Moore, J. K.
1963. Refinement of a Method for Filtering and Preserving Marine Phytoplankton on a Membrane Filter. Limnology and Oceanography, vol. 8, No. 2, pp. 304–305.

Odum, E. P. and R. W. Bachmann
1959. Uptake of Zinc-65 and Primary Productivity in Marine Benthic Algae. Biological Bulletin, Woods Hole, vol. 117, pp. 1–421.

Odum, H. T.
1960. Analyses of Diurnal Oxygen Curves for the Essay of Reaeration Rates and Metabolism in Polluted Marine Bays. In: Pearson, E. A. (ed.), Waste Disposal in the Marine Environment. Pergamon Press, New York, pp. 547–555.

Orlob, G. T.
1956. Evaluating Bacterial Contamination in Sea Water Samples. Public Health Reports, vol. 71, No. 12, pp. 1246–1252.

Parsons, T. R. and J. D. H. Strickland
1963. Discussion of Spectrophotometric Determination of Marine-Plant Pigments, with Revised Equations for Ascertaining Chlorophylls and Carotenoids. Journal of Marine Research, vol. 21, No. 3, pp. 155–163.

Pratt, D. M. and H. Berkson
1959. Two Sources of Error in the Oxygen Light and Dark Bottle Method. Limnology and Oceanography, vol. 4, No. 3, pp. 328–334.

Presnell, M. W., W. Arcisz and C. B. Kelly
1954. Comparison of the Membrane Filter and Most Probable Number Techniques in Examining Sea Water. Public Health Reports, vol. 69, No. 3, pp. 300–304.

Reish, D. J.
1961. The Use of the Sediment Bottle Collector for Monitoring Polluted Marine Waters. California Fish and Game, vol. 47, No. 3, pp. 261–272.

Richards, F. A. with T. C. Thompson
1952. The Estimation and Characterization of Plankton Populations by Pigment Analysis. II. A Spectrophotometric Method for the Estimation of Plankton Pigments. Journal of Marine Research, vol. 11, No. 2, pp. 156–175.

Reish, D. J.
1960. The Use of Marine Invertebrates as Indicators of Water Quality. In: Pearson, E. A. (ed.), Waste Disposal in the Marine Environment. Pergamon Press, New York, pp. 92–103.

Ryther, J. H.
1956. The Measurement of Primary Production. Limnology and Oceanography, vol. 1, No. 2, pp. 72–84.

Ryther, J. H. and C. S. Yentsch
1957. The Estimation of Phytoplankton Production in the Ocean from Chlorophyll and Light Data. Limnology and Oceanography, vol. 2, No. 3, pp. 281–286.

Ryther, J. H. and R. R. L. Guillard
1959. Enrichment Experiments as a Means of Studying Nutrients Limiting to Phytoplankton Production. Deep Sea Research, vol. 6, No. 1, pp. 65–69.

Sayed, S. Z. E. and B. D. Lee
1963. Evaluation of an Automatic Technique for Counting Unicellular Organisms. Journal of Marine Research, vol. 21, No. 1, pp. 59–73.

SIMMONS, H. B.

1960. Application and Limitations of Estuary Models in Pollution Analyses. In: Pearson, E. A. (ed.), Waste Disposal in the Marine Environment. Pergamon Press, New York, pp. 540–546.

TURNER, C. H., E. E. EBERT and R. R. GIVEN

1964. An Ecological Survey of a Marine Environment Prior to Installation of a Submarine Outfall. California Fish and Game, vol. 50, No. 3, pp. 176–188.

TURNER, C. H., E. E. EBERT and R. R. GIVEN

1965. Survey of the Marine Environment Off Shore of San Elijo Lagoon, San Diego County. California Fish and Game, vol. 51, No. 2, pp. 81–112.

SAMPLERS

ALLEN, D. M. and A. INGLIS

1958. A Pushnet for Quantitative Sampling of Shrimp in Shallow Estuaries. Limnology and Oceanography, vol. 3, No. 2, pp. 239–241.

BODMAN, R. H., L. V. SLABAUGH and V. T. BOWEN

1961. A Multi-Purpose Large-Volume Sea-Water Sampler. Journal of Marine Research, vol. 19, No. 2, pp. 141–148.

BUCK, J. D. and R. C. CLEVERDON

1960. The Spread Plate as a Method for the Enumeration of Marine Bacteria. Limnology and Oceanography, vol. 5, No. 1, pp. 78–80.

COLLIER, A. and S. M. RAY

1948. An Automatic Proportioning Apparatus for Experimental Study of the Effects of Chemical Solutions on Aquatic Animals. Science, vol. 107, pp. 576-577.

GAUL, R. D., D. D. KETCHUM, J. T. SHAW and J. M. SNODGRASS (eds.)

1962. Marine Sciences Instrumentation. Plenum Press, New York, vol. 1, 354 pp.

HOLME, N. A.

1964. Methods of Sampling the Benthos. In: Russell, F. S. (ed.), Advances in Marine Biology, vol. 2, Academic Press, Inc. (London) Ltd., 274 pp.

HOLMES, R. W.

1962. The Preparation of Marine Phytoplankton for Microscopic Examination and Enumeration on Molecular Filters. U. S. Fish and Wildlife Service, Special Scientific Report, Fisheries No. 433, pp. 1–6.

KIMBALL, J. F., JR. and E. J. F. WOOD

1964. A Simple Centrifuge for Phytoplankton Studies. Bulletin of Marine Science of the Gulf and Caribbean, vol. 14, No. 4, pp. 539–544.

MACINTYRE, R. J.

1964. A Box Dredge for Quantitative Sampling of Benthic Organisms. Limnology and Oceanography, vol. 9, No. 3, pp. 460–461.

MERNA, J. W.

1962. Quantitative Sampling with the Orange Peel Dredge. Limnology and Oceanography, vol. 7, No. 3, pp. 432–433.

MILLER, D.

1962. A Modification of the Small Hardy Plankton Sampler for Simultaneous High-Speed Plankton Hauls. Bulletin of Marine Ecology, vol. 5, No. 45, pp. 165–172.

MOORE, J. K.

1963. Refinement of a Method for Filtering and Preserving Marine Phytoplankton on a Membrane Filter. Limnology and Oceanography, vol. 8, No. 2, pp. 304–305.

MURRAY, J. W.

1962. A New Bottom-Water Sampler for Ecologists. Journal of the Marine Biological Association of the United Kingdom, vol. 42, No. 3, pp. 499–501.

PEARCY, W. G. and L. HUBBARD

1964. A Modification of the Isaacs-Kidd Midwater Trawl for Sampling at Different Depth Intervals. Deep Sea Research, vol. 11, No. 2, pp. 263–264.

SACHS, P. L. and S. O. RAYMOND

1965. A New Unattached Sediment Sampler. Journal of Marine Research, vol. 23, No. 1, pp. 44–53.

SOLI, G.

1964. A System for Isolating Phytoplankton Organisms in Unialgal and Bacteria-Free Culture. Limnology and Oceanography, vol. 9, No. 2, pp. 265–268.

CRITERIA FOR AQUATIC LIFE

BROAD, A. C.
1965. Environmental Requirements of Shrimp. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999–WP–25, pp. 86–91.

COULSON, E. J., H. LEVINE and R. E. REMINGTON
1932. Oysters and Anemia. American Journal of Public Health, vol. 22, No. 11, pp. 1141–1146.

DEUBLER, E. E., JR. and G. S. POSNER
1963. Response of Postlarval Flounders, *Paralicthys lethostigma*, to Water of Low Oxygen Concentrations. Copeia, No. 2, pp. 312–319.

DOW, R. L.
1958. Sanitary Criteria for Shellfish by Species and by Area. Proceedings of the National Shellfisheries Association, vol. 48, pp. 23–29.

GALTSOFF, P. S.
1960. Environmental Requirements of Oysters in Relation to Pollution. In: Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 128–134.

GARBER, W. F.
1956. Bacteriological Standards for Bathing Waters. Sewage and Industrial Wastes, vol. 28, No. 6, pp. 795–808.

HUNTER, A. C. and C. W. HARRISON
1928. Bacteriology and Chemistry of Oysters, with Special Reference to Regulatory Control of Production, Handling, and Shipment. U. S. Department of Agriculture, Technical Bulletin No. 64, pp. 1–75.

LOOSANOFF, V. L., H. C. DAVIS and P. E. CHANLEY
1955. Food Requirements of Some Bivalve Larvae. Proceedings of the National Shellfisheries Association, vol. 45, pp. 66–83.

RAYMONT, J. E. G.
1959. The Respiration of some Planktonic Copepods III. The Oxygen Requirements of some American Species. Limnology and Oceanography, vol. 4, No. 4, pp. 479–491.

INDUSTRIAL WASTES

GENERAL REFERENCES

EBERMAN, J. W.
1956. Disposal of Wastes at Sea. Sewage and Industrial Wastes, vol. 28, No. 11, pp. 1365–1370.

FISHER, L. M.
1938. Effects of Industrial Wastes and Sewage on Shellfish and Fin Fish. Civil Engineering, vol. 8, No. 7, pp. 454–456.

HOOD, D. W., B. STEVENSON and L. M. JEFFREY
1958. Deep Sea Disposal of Industrial Wastes. Industrial and Engineering Chemistry, No. 50, pp. 885–888.

INGRAM, W. M. and P. DOUDOROFF
1953. Selected Bibliography of Publications on Industrial Wastes Relating to Fish and Oysters. Public Health Service Publication No. 270, (Public Health Service Bibliography Series No. 10), pp. 1–28.

KRISHNAMOORTHY, K. P. and G. VISWESWARA
1963. Hydrobiological Studies with Reference to Sudden Fish Mortality. Hydrbiologia, vol. 21, Nos. 3 and 4, pp. 275–303.

OLSON, R. A., H. F. BRUST and W. L. TRESSLER
1941. Studies of the Effects of Industrial Pollution in the Lower Patapsco River Area. Chesapeake Biological Laboratory, Publication No. 43, pp. 1–40.

REDFIELD, A. C. and L. A. WALFORD
1951. A Study of the Disposal of Chemical Wastes at Sea. National Academy of Sciences—National Research Council, Publication 201, pp. 1–49.

COOLING WATER

Doudoroff, P.

1938. Reactions of Marine Fishes to Temperature Gradients. Biological Bulletin, Woods Hole, vol. 75, pp. 494–509.

Doudoroff, P.

1942. The Resistance and Acclimation of Marine Fishes to Temperature Changes. I. Experiments with *Girella nigricans* (Ayers). Biological Bulletin, Woods Hole, vol. 83, pp. 219–244.

Doudoroff, P.

1945. The Resistance and Acclimation of Marine Fishes to Temperature Changes. II. Experiments with *Fundulus* and *Atherinops*. Biological Bulletin, Woods Hole, vol. 88, pp. 194–206.

Gameson, A. L. H., H. Hall and W. S. Preddy

1957. Effects of Heated Discharges on the Temperature of the Thames Estuary. The Engineer, December 6, 13 and 20, 1957, Water Pollution Research Laboratory Reprint No. 318, pp. 3–12.

Markowski, S.

1959. The Cooling Water of Power Stations: A New Factor in the Environment of Marine and Freshwater Invertebrates. Journal of Animal Ecology, vol. 28, No. 2, pp. 243–258.

Reish, D. J. and J. L. Barnard

1959. Marine Pollution. Water and Sewage Works, vol. 106, No. 6, pp. 259–262.

METALS AND MANUFACTURING

Arnold, E. L., Jr. and W. F. Royce

1950. Observations of the Effect of Acid-Iron Waste Disposal at Sea on Animal Populations. U. S. Fish and Wildlife Service, Special Scientific Reports, Fisheries, No. 11, pp. 1–12.

Davis, C. C.

1948. Studies of the Effects of Industrial Pollution in the Lower Patapsco River Area, 2: The Effect of Copperas Pollution on Plankton. Chesapeake Biological Laboratory, Publication No. 72, pp. 3–12.

Nelson, T. C.

1960. Some Aspects of Pollution, Parasitism, and Inlet Restriction in Three New Jersey Estuaries. Biological Problems in Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 203–211.

O'Connor, J. T., C. E. Renn and I. Wintner

1964. Zinc Concentrations in Rivers of the Chesapeake Bay Region. Journal of the American Water Works Association, vol. 56, No. 3, pp. 280–286.

PETROLEUM

Anon.

1926. Oil Pollution of Navigable Waters. Appendix 6, Report of the U. S. Bureau of Fisheries: Preliminary Investigation on Effect of Oil Pollution on Marine Pelagic Eggs. April 1925, pp. 85–92.

Chipman, W. A. and P. S. Galtsoff

1949. Effects of Oil Mixed with Carbonized Sand on Aquatic Animals. U. S. Fish and Wildlife Service, Special Scientific Report, Fisheries No. 1, pp. 1–52.

Cole, B. T., H. J. Bennet and J. D. Miller

1958. Tolerance of Euryhaline Fish Forms to Dilutions of Oil Field Bleed Water. Proceedings of the Louisiana Academy of Science, vol. 20, pp. 13–23.

Daugherty, F. M., Jr.

1951. Effects of Some Chemicals Used in Oil Well Drilling on Marine Animals. Sewage and Industrial Wastes, vol. 23, No. 10, pp. 1282–1287.

Galtsoff, P. S., H. F. Prytherch, et al.

1935. Effects of Crude Oil Pollution on Oysters. U. S. Bureau of Fisheries Bulletin, vol. 48, pp. 142–210.

Galtsoff, P. S.

1936. Oil Pollution in Coastal Waters. Proceedings of the North American

Wildlife Conference, February 3–7, 1936, Senate Committee Print, 74th Congress, Second Session, pp. 550–555.

GILES, L. A., JR. and J. LIVINGSTON
1960. Oil Pollution of the Seas. Transactions of the North American Wildlife Conference, vol. 25, pp. 297–303.

GOWANLOCH, J. N.
1935. Pollution by Oil in Relation to Oysters. Transactions of the American Fisheries Society, vol. 65, pp. 293–296.

GUTSELL, J. S.
1921. Danger to Fisheries from Oil and Tar Pollution of Waters. Appendix VII, Report of U. S. Commissioner of Fisheries for 1921, pp. 3–10.

HART, J. L., H. B. MARSHALL and D. BEALL
1933. The Extent of the Pollution Caused by Pilchard Reduction Plants in British Columbia. Bulletin of the Fisheries Research Board of Canada, No. 39, pp. 1–11.

HART, J. L.
1933. The Investigation of Pollution by Pilchard Reduction Plants. Fisheries Research Board of Canada, Pacific Progress Report No. 16, pp. 14–15.

HAWKES, A. L.
1961. A Review of the Nature and Extent of Damage Caused by Oil Pollution at Sea. Transactions of the North American Wildlife and Natural Resources Conference, vol. 26, pp. 343–355.

HOPKINS, A. E.
1935. Effects of Pulp Mill Pollution on Oysters. I. The Effect of Sulphite Waste Liquor on the Oyster, *Ostrea lurida*. In: Hopkins, et al., Effects of Pulp Mill Pollution on Oysters. U. S. Bureau of Fisheries Bulletin, vol. 47, No. 6, pp. 125–162.

LANE, F. W., A. D. BAUER, et al.
1924. Effect of Oil Pollution of Coast and Other Waters on the Public Health. Public Health Reports, vol. 39, No. 12, pp. 1657–1664.

LANE, F. W., A. D. BAUER, et al.
1925. Effect of Oil Pollution on Marine and Wildlife. Appendix 5 to Report of the U. S. Commissioner of Fisheries for 1925, Bureau of Fisheries Document No. 995, pp. 171–181.

LANE, F. W., A. D. BAUER, H. F. FISHER and P. N. HARDING
1926. Effect of Oil Pollution on Marine and Wildlife. Report of the U. S. Commissioner of Fisheries for 1925, pp. 171–181.

MCDONALD, M.
1885. Report on the Pollution of the Potomac River by the Discharge of Waste Products from Gas Manufacture. U. S. Fish Commission Bulletin, No. 5, pp. 125–126.

TAGATZ, M. E.
1961. Reduced Oxygen Tolerance and Toxicity of Petroleum Products to Juvenile American Shad. Chesapeake Science, vol. 2, Nos. 1/2, pp. 65–71.

ZOBELL, C. E.
1963. The Occurrence, Effects, and Fate of Oil Polluting the Sea. International Journal of Air and Water Pollution, vol. 7, Nos. 2/3, pp. 173–178.

PULP, PAPER, AND TEXTILES

ALDERDICE, D. F. and J. R. BRETT
1957. Some Effects of Kraft Mill Effluent on Young Pacific Salmon. Journal of the Fisheries Research Board of Canada, vol. 14, No. 5, pp. 783–795.

BARTSCH, A. F.
1963. Paper Mill Pollution in Puget Sound. Transactions of the North American Wildlife Conference, vol. 28, pp. 1–369.

BREESE, W. P., R. E. MILLEMANN and R. E. DIMICK
1963. Stimulation of Spawning in the Mussels, *Mytilus edulis* Linnaeus and *Mytilus californianus* Conrad by Kraft Mill Effluent. Biological Bulletin, Woods Hole, vol. 25, pp. 1–197.

CHIPMAN, W. A.
1948. Physiological Effects of Sulphate Pulp Mill Wastes on Shellfish. Paper Trade Journal, vol. 127, No. 12, pp. 47–49.

GALTSOFF, P. S., W. A. CHIPMAN, et al.
1938. Preliminary Report on the Decline of the Oyster Industry of the York River, Virginia, and the Effects of

Pulp-Mill Pollution on Oysters. U. S. Bureau of Fisheries, Investigational Report No. 37, vol. 2, pp. 1–42.

GALTSOFF, P. S., W. A. CHIPMAN, et al.
1947. Ecological and Physiological Studies of the Effect of Sulfate Pulp Mill Wastes on Oysters in the York River, Virginia. U. S. Fish and Wildlife Service, Fishery Bulletin No. 43, pp. 59–186.

GREER, B. A., R. E. GILLESPIE and P. C. TRUSSELL
1956. Biochemical Oxygen Demand of Total Effluent from Full-Bleach Kraft Mill. Technical Association of the Pulp and Paper Industry, vol. 39, No. 8, pp. 599–602.

GUNTER, G. and J. MCKEE
1960. On Oysters and Sulfite Waste Liquor. A Report for the Pollution Control Commission of the State of Washington, pp. 1–93.

GUNTER, G. and J. MCKEE
1961. On Oysters and Sulfite Waste Liquor. Part I. Industrial Water and Wastes, vol. 6, No. 6, pp. 182–186.

GUNTER, G. and J. MCKEE
1962. On Oysters and Sulfite Waste Liquor. Part II. Industrial Water and Wastes, vol. 7, No. 1, pp. 7–9.

HAYDU, E. P., H. R. AMBERG and R. E. DIMICK
1952. The Effects of Kraft Mill Waste Components on Certain Salmonid Fishes of the Pacific Northwest. Technical Association of the Pulp and Paper Industry, vol. 35, No. 12, pp. 545–549.

HOLLAND, G. A. (ed.)
1953. Toxic Effects of Sulfite Waste Liquor on Young Salmon. State of Washington, Department of Fisheries, Research Bulletin No. 1, pp. 1–111.

HOPKINS, A. E., P. S. GALTSOFF and H. C. MCMILLIN
1931. Effects of Pulp Mill Pollution on Oysters. U. S. Bureau of Fishery Bulletin, vol. 47, pp. 125–186.

JONES, B. F., C. E. WARREN, C. E. BOND and P. DOUDOROFF
1956. Avoidance Reactions of Salmonid Fishes to Pulp Mill Effluents. Sewage and Industrial Wastes, vol. 28, No. 12, pp. 1403–1413.

MCKERNAN, D. L., V. TARTAR and R. TOLLEFSON
1949. An Investigation of the Decline of the Native Oyster Industry of the State of Washington, with Special Reference to the Effects of Sulfite Pulp Mill Waste on the Olympia Oyster *(Ostrea lurida)*. State of Washington Department of Fisheries Biological Report No. 49a, pp. 115–165.

MCMILLIN, H. C.
1935. Effects of Pulp Mill Pollution on Oysters. III. Investigations of Oyster Mortality in Oakland Bay, Washington. In: Hopkins, et al., Effects of Pulp Mill Pollution on Oysters. U. S. Bureau of Fisheries Bulletin, vol. 47, No. 6, pp. 167–186.

ODLAUG, T. O.
1946. Effects of Stabilized and Unstabilized Waste Sulfite Liquor on the Olympia Oyster, *Ostrea lurida*. Transactions of the American Microscopical Society, vol. 68, No. 3, pp. 163–182.

ORLOB, G. T. and E. F. ELDRIDGE
1954. Deep-Water Disposal of Pulp Mill Wastes into Port Gardner Bay, Everett, Washington. Sewage and Industrial Wastes, vol. 26, No. 4, pp. 520–530.

TULLY, J. P.
1949. Oceanography and Prediction of Pulp Mill Pollution in Alberni Inlet. Bulletin of the Fisheries Research Board of Canada, No. 83, pp. 1–169.

WALDICHUK, M. and J. P. TULLY
1953. Pollution Study in Nanaimo Harbour. Fisheries Research Board of Canada, Pacific Progress Report, No. 97, pp. 14–17.

WALDICHUK, M.
1954. Effect of Pulp Mill Waste in Alberni Harbour. Fisheries Research Board of Canada, Pacific Progress Report, No. 101, pp. 23–26.

WALDICHUK, M.
1956. Pulp Mill Pollution in Alberni Harbour, British Columbia. Sewage and Industrial Wastes, vol. 28, No. 2, pp. 199–205.

WALDICHUK, M.
1957. Report on Pollution Studies Conducted in Western Canada. In: Biological Problems in Water Pollution—

Transactions of 1956 Seminar, Robert A. Taft Sanitary Engineering Center, U. S. Public Health Service, Cincinnati, Ohio, pp. 188–194.

Waldichuk, M.
1960. Effects of Pulp and Paper Mill Wastes on the Marine Environment. In: Biological Problems on Water Pollution—Transactions of the 1959 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, pp. 160–176.

Waldichuk, M.
1962. Some Water Pollution Problems Connected with the Disposal of Pulp Mill Wastes. Canadian Fish Culturist, vol. 31, No. 1, pp. 3–34.

Waldichuk, M.
1962. Amphipods in Low-Oxygen Marine Waters Adjacent to a Sulphite Pulp Mill. Journal of the Fisheries Research Board of Canada, vol. 19, No. 6, pp. 1163–1165.

Waldichuk, M.
1964. Dispersion of Kraft-Mill Effluent from a Submarine Diffuser in Stuart Channel, British Columbia. Journal of the Fisheries Research Board of Canada, vol. 21, No. 5, pp. 1289–1316.

ORGANISM IDENTIFICATION

GENERAL REFERENCES

Hedgepeth, J. and X. Hinton
1961. Common Seashore Life of Southern California. Naturegraph Company, Heraldsburg, California, 65 pp.

Light, S. F., R. I. Smith, F. A. Pitelka, D. P. Abbott and F. M. Weesner
1961. Intertidal Invertebrates of the Central California Coast. University of California Press, Berkeley and Los Angeles, California, 446 pp.

Miner, R. W.
1950. Field Book of Seashore Life. G. P. Putnam's Sons, New York, 888 pp.

Pratt, H. S.
1951. A Manual of the Common Invertebrate Animals Exclusive of Insects. The Blakiston Company, Philadelphia, Pennsylvania, 854 pp.

Ricketts, E. F. and J. Calvin
1963. Between Pacific Tides. Third Edition, Revised. Revisions by Joel W. Hedgpeth. Stanford University Press, California, 516 pp.

PROTOZOA, PORIFERA, COELENTERATES, ECHINODERMS, AND ANNELIDS

DeLaubenfels, M. W.
1948. The Order Keratosa of the Phylum Porifera, A Monographic Study. Allan Hancock Foundation, Occasional Paper No. 3, pp. 1–217.

Fraser, C. M.
1937. Hydroids of the Pacific Coast of Canada and the United States. University of Toronto Press, 207 pp.

Galloway, J. J.
1933. Manual of the Foraminifera. Principia Press, Bloomington, Indiana, 483 pp.

Hartman, O.
1961. Polychaete Annelids from California. Publications of the Allan Hancock Foundation, Occasional Paper No. 25, pp. 1–226.

Harvey, E. B.
1956. The American Arbacia and Other Sea Urchins. Princeton University Press, Princeton, New Jersey, 298 pp.

Hornfeld, M. M.
1931. Recent Littoral Foraminifera from Texas and Louisiana. Department of Geology, Stanford University, Contribution No. 3, pp. 77–101.

Mayer, A. G.
1910. Medusae of the World. Carnegie Institute, Washington, Publication 109, 3 vols.

Pettibone, M. H.
1963. Marine Polychaete Worms of the New England Region. I. Aphroditidae through Trochoahaetidae. Smithsonian Institution, United States National Museum, Bulletin 227, pp. 1–356.

Schaeffer, A. A.
1926. Taxonomy of the Amoebas with Descriptions of Thirty-Nine New Ma-

rine and Freshwater Species. Carnegie Institution, Washington, Publication No. 345, pp. 1–116.

MOLLUSCS

ABBOTT, R. T.

1954. American Seashells. D. Van Nostrand Company, Incorporated, 541 pp.

BAKER, F. and G. D. HANNA

1927. Marine Mollusca of the Order Opisthobranchiata. Proceedings of the California Academy of Science, Ser. 4, 16, No. 5, pp. 123–135.

BAKER, F.

1926. Mollusca of the Family Triphoridae. Proceedings of the California Academy of Science, Ser. 4, 15, No. 6, pp. 222–239.

CLENCH, W. J.

1947. The genera *Purpura* and *Thais* in the Western Atlantic. Johnsonia, vol. 2, No. 23, pp. 61–92.

FITCH, J. E.

1953. Common Marine Bivalves of California. California Fish and Game, Fisheries Bulletin No. 90, pp. 1–102.

HELFER, J. R.

1946. The Classification of Cypraeidae. Nautilus, vol. 60, No. 2, pp. 49–53.

INGRAM, W. M.

1947. Hawaiian Cypraeidae. B. P. Bishop Museum, Occasional Papers, vol. 19, No. 1, pp. 1–23.

INGRAM, W. M.

1951. The Living Cypraeidae of the Western Hemisphere. Bulletin of American Paleontology, vol. 33, No. 136, pp. 1–55.

KEEN, A. M.

1963. Marine Molluscan Genera of Western North America. Stanford University Press, Pasadena, California, 126 pp.

KEEN, A. M. and D. FRIZZELL

1946. Illustrated Key to West North American Pelecepod Genera. Stanford University Press, California, pp. 1–28.

KEEN, A. M. and J. C. PEARSON

1952. Illustrated Key to West North American Gastropod Genera. Stanford University Press, California, pp. 1–39.

MAWRY, C. J.

1922. Recent Molluscs of the Gulf of Mexico and Pleistocene and Pliocene Species from the Gulf States. Bulletin of American Paleontology, vol. 9, No. 38, pp. 34–142.

MAWRY, C. J.

1920. Recent Molluscs of the Gulf of Mexico and Pleistocene and Pliocene Species from the Gulf States. Bulletin of American Paleontology, vol. 8, No. 34, pp. 1–115.

OLDROYD, I. S.

1924. Marine Shells of Puget Sound and Vicinity. Puget Sound Biological Station, University of Washington, Seattle, Washington, No. 4, pp. 1–272.

SMITH, M.

1951. East Coast Marine Shells. Descriptions of Shore Mollusks Together with Many Living Below Tide Mark, from Maine to Texas Inclusive, Especially Florida. (4th Ed.), Edwards Brothers, Ann Arbor, Michigan, 314 pp.

TURNER, R. D.

1955. The Family Pholadidae in the Western Atlantic and the Eastern Pacific. Part II. Martensunae, Jouannetinae, and Xylophazinae. Johnsonia, vol. 3, No. 34, pp. 65–160.

ARTHROPODS

BANNER, A. H.

1947. A Taxonomic Study of the Mysidacea and Euphausiacea (Crustacea) of the Northeastern Pacific. Part I. Mysidacea, from family Tophogastridae through Tribe Eurythropini. Transactions of the Royal Canadian Institute, vol. 26, pp. 345–399.

1948. Ibid. Part 2. Mysidacea from Tribe Inysini through Sub-family Mysidellinae, Ibid, vol. 27, pp. 65–111.

1949. Ibid. Part 3. Euphausiacea, Ibid, vol. 28, pp. 1–62.

Barnard, J. L.
1954. Marine Amphipoda of Oregon. Oregon State University, Corvallis, Oregon, pp. 1–107.

Davis, C. C.
1949. The Pelagic Copepoda of the Northeastern Pacific Ocean. University of Washington, Publication of Biology, vol. 14, pp. 1–118.

Garth, J. S.
1958. Brachyura of the Pacific Coast of America, Oxyrhyncha. Publications of the Allan Hancock Foundation, Occational Paper 21, pp. 1–499.

Haiz, J.
1960. The Porcellanidae (Crustacea, Anomura) of the Eastern Pacific. Publications of the Allan Hancock Foundation, Occasional Paper No. 24, pp. 1–440.

Hedgpeth, J. W.
1949. The North American Species of *Macrobrachium* (river shrimp). Texas Journal of Science, vol. 1, No. 3, pp. 28–38.

Hedgpeth, J. W.
1948. The Pycnogonida of the Western North Atlantic and the Caribbean. Proceedings of the U. S. National Museum, vol. 97, pp. 157–342.

Halthius, L. B.
1951. A General Revision of the Palaemonidae (Crustacea Decapoda Natantia) of the Americas. I. The Subfamilies Euryrhynchinae and Pontoniinae. Allan Hancock Foundation Publications, Occasional Papers, No. 11, pp. 1–332.

Holthius, L. B.
1952. A General Revision of the Palaemonidae (Crustacea Depacoda Natantia) of the Americas. II. The Subfamily Palaemoninae. Allan Hancock Foundation Publications, Occasional Papers, No. 12, pp. 1–396.

Pilsbry, H. A.
1916. The Sessile Barnacles (Cirripedia) Contained in the Collections of the U. S. National Museum, Including a Monograph of the America Species. Bulletin of the U. S. National Museum, No. 93, pp. 1–366.

Rathburn, M. J.
1918. The Grapsoid Crabs of America. Bulletin of the U. S. National Museum, No. 97, pp. 1–461.

Rathburn, M. J.
1925. The Spider Crabs of America. Bulletin of the U. S. National Museum, No. 129, pp. 1–613.

Rathburn, M. J.
1930. The Cancroid Crabs of America. Bulletin of the U. S. National Museum, No. 152, pp. 1–609.

Schmitt, W. L.
1921. Marine Decapod Crustacea of California. University of California Publications of Zoology, No. 23, pp. 1–470.

Tattersall, W. M..
1951. A Review of the Mysidacea of the United States. Bulletin of the U. S. National Museum, No. 201, pp. 1–292.

Voss, G. L.
1955. A Key to the Commercial and Potentially Commercial Shrimp of the Family Penaeidae of the Western North Atlantic and the Gulf of Mexico. Florida State Board of Conservation, Technical Ser. 14, pp. 1–23.

Williams, A. B.
1965. Marine Decapod Crustaceans of the Carolinas. U. S. Fish and Wildlife Service, Fishery Bulletin, vol. 65, No. 1, pp. 1–298.

Wilson, C. B.
1932. The Copepods of the Woods Hole Region, Massachusetts. Bulletin of the U. S. National Museum, No. 158, pp. 1–635.

FISHES

Bailey, R. M., E. A. Lachner, C. C. Lindsey, C. R. Robins, P. M. Roedel, W. B. Scott and L. P. Woods
1960. A List of Common and Scientific Names of Fishes from the United States and Canada. American Fisheries Society, Special Publication No. 2, pp. 1–102.

Breder, C. M.
1948. Fieldbook of Marine Fishes. G. P. Putnam's Sons, New York, 332 pp.

Briggs, J. C.
1955. A Monograph of the Clingfishes (Order Xenopterygii). Stanford Ichthyology Bulletin, No. 6, pp. 1–224.

Clemens, W. A. and G. V. Wilby
1961. (2nd Edition) Fishes of the Pacific Coast of Canada. Bulletin of the Fisheries Research Board of Canada, No. 68, pp. 1–443.

Ginsburg, I.
1952. Flounders of the Genus *Paralichthys* and Related Genera in American Waters. U. S. Fish and Wildlife Service, Fishery Bulletin, vol. 52, No. 71, pp. 265–351.

Jordan, D. S.
1963. The Genera of Fishes and a Classification of Fishes. Stanford University Press, Stanford, California, 800 pp.

Olsen, Y. H.
1963. Fishes of the Western North Atlantic, Part 3, Soft-Rayed Bony Fishes. Sears Foundation for Marine Research, Yale University, New Haven, Connecticut, 630 pp.

Perlmutter, A.
1961. Guide to Marine Fishes. New York University Press, New York, 431 pp.

Phillips, J. B.
1957. A Review of the Rockfishes of California (Family Scorpaenidae). California Fish and Game, Fisheries Bulletin No. 104, pp. 1–158.

Roedel, P. M.
1948. Common Marine Fishes of California. California Fish and Game, Fisheries Bulletin No. 68, pp. 1–150.

Roedel, P. M.
1953. Common Ocean Fishes of the California Coast. California Fish and Game, Fisheries Bulletin No. 91, pp. 1–184.

Sears Foundation for Marine Research, Memoir No. I. Fishes of the Western North Atlantic.

Parr, A. E. and Y. H. Olsen (eds.)
1948. Part I. Lancelets, Cyclostomes, and Sharks. 576 pp.
1953. Part II. Sawfishes, Guitarfishes, Skates, Rays, and Chimaeroids. 588 pp.

Olsen, Y. H. (ed.)
1963. Part III. Soft-Rayed Bony Fishes, Class Osteichthyes. Order Lepistostei. Order Isospondylei. Suborders Salmonoidea, Elopoidea, Clupeoidea. 630 pp.
1964. Part IV. Soft-Rayed Bony Fishes, Order Isospondylei (In Part). Suborders Argentinoidea, Stomiatoidea, Esocoidea, and Bathylaconoidea. Order Giganturoidei. 599 pp.

Olsen, Y. H. and J. W. Atz (eds.)
1966. Part V. Order Iniomi. Aulopidae, Synodontidae, Bathysauridae, Bathypteroidae, Ipnopidae, Chlorophthalmidae, Myctophidae and Neoscopelidae (Interim Accounts), Scopelosauridae, Paralepididae, Omosudidae, Alepisauridae, Anotopteridae, Evermannellidae, Scopelarchidae. Order Lyomeri. Eurypharyngidae, Saccopharyngidae. 647 pp.

Walford, L. A.
1937. Marine Game Fishes of the Pacific Coast from Alaska to the Equator. University of California Press, Berkeley, California, 205 pp.

ALGAE AND FLOWERING AQUATIC PLANTS

Dawson, E. Y.
1946. Marine Algae of the Pacific Coast of North America. Memoirs of the Southern California Academy of Sciences, vol. 3, No. 2.

Cupp, E. E.
1943. Marine Plankton Diatoms of the West Coast of North America. Scripps Institute of Oceanography Bulletin, vol. 5, No. 1, pp. 1–238.

Davis, C. C.
1955. The Marine and Fresh-Water Plankton. Michigan State University Press, East Lansing, Michigan, 562 pp.

Graham, H. W. and N. Bronikovsky
1944. The Genus *Ceratium* in the Pacific and North Atlantic Oceans. Publications of the Carnegie Institute, Washington, No. 565, pp. 1–209.

GRIFFITH, R. E.

1961. The Phytoplankton of Chesapeake Bay—An Illustrated Guide to the Genera. Chesapeake Biological Laboratory Contribution No. 172, pp. 1–79.

HENDY, N. I.

1964. An Introductory Account of the Smaller Algae of British Coastal Waters. Part V. Bacillariophceae (Diatoms). Fishery Investigations, Series IV, Her Majesty's Stationery Office, London, England, pp. 1–317.

HUMM, H. J.

1962. Key to the Genera of Marine Bluegreen Algae of Southeastern North America. Virginia Fisheries Laboratory, Special Scientific Report No. 28, pp. 1–5.

KOFOID, C. A. and O. SWEZY

1921. The Free-Living Unarmored Dinoflagellata. University of California Press, Berkeley, California, 563 pp.

MULFORD, R. A.

1962. Diatoms from Virginia Tidal Waters. Virginia Institute of Marine Science, Special Scientific Report No. 30, pp. 1–33.

TAYLOR, W. R.

1957. Marine Algae of the Northeastern Coast of North America. 2nd Ed. University of Michigan Press, Ann Arbor, 509 pp.

OTHER ORGANISMS

COE, W. R.

1926. The Pelagic Nemerteans. Memoirs of the Museum of Comparative Zoology, No. 49, pp. 1–244.

CHITWOOD, B. G.

1951. North American Marine Nematodes. Texas Journal of Science, vol. 3, No. 4, pp. 617–672.

MAYER, A. G.

1912. Ctenophores of the Atlantic Coast of North America. Publications of the Carnegie Institute, Washington, No. 162, pp. 1–58.

MINER, R. W.

1950. Fieldbook of Seashore Life. Putnam's & Sons, New York, 888 pp.

OSBURN, R. C.

1953. Bryozoa of the Pacific Coast of America. Allan Hancock Foundation, Occasional Paper, No. 14, pp. 1–841.

PRATT, H. S.

1951. A Manual of the Common Invertebrate Animals Exclusive of Insects. The Blakiston Company, Philadelphia and Toronto, 854 pp.

SMITH, F. G. W.

1948. Atlantic Reef Corals. University of Miami Press, Coral Gables, Florida, pp. 1–112.

VAN NAME, W. G.

1945. The North and South American Ascidians. Bulletin of the American Museum of Natural History, No. 84, pp. 1–476.

ASPECTS OF WATER QUALITY

BOOKS

CHAPMAN, V. J.

1960. Salt Marshes and Salt Deserts of the World. Interscience Publishers, New York, 392 pp.

EKMAN, S.

1953. Zoogeography of the Sea. Sidgwick & Jackson, London, 417 pp.

GALTSOFF, P. S. (Coordinator)

1954. Gulf of Mexico, Its Origin, Waters, and Marine Life. U. S. Fish and Wildlife Service, Fishery Bulletin No. 89, 604 pp.

GALTSOFF, P. S.

1964. The American Oyster *Crossostrea virginica* Gmelin. U. S. Fish and Wildlife Service, Fishery Bulletin No. 64, 480 pp.

HARVEY, H. W.

1955. The Chemistry and Fertility of Sea Waters. Cambridge University Press, 240 pp.

HEUKELEKIAN, H. and N. C. DONDERO (eds.)

1964. Principles and Applications of Aquatic Microbiology. (Rudolfs Research Conference Proceedings, 1963) John Wiley and Sons, New York, 452 pp.

HILL, M. N. (ed.)
1963. The Sea. Vol. 2. The Composition of Sea Water. Comparative and Descriptive Oceanography, John Wiley and Sons, New York, 554 pp.

HEDGEPETH, J. W. (ed.)
1957. (Reprinted 1963) Treatise on Marine Ecology and Paleoecology. Vol. 1. Ecology. Geological Society of America, Memoir 67, New York, 1296 pp.

JOHNSON, T. W., JR. and F. K. SPARROW, JR.
1961. Fungi in Oceans and Estuaries. Hafner Publishing Company, New York, 663 pp.

REID, G. K.
1961. Ecology of Inland Waters and Estuaries. Reinhold Publishing Corporation, New York, 375 pp.

LEWIN, R. A. (ed.)
1962. Algae. Scripps Institute of Oceanography, La Jolla, California, 938 pp.

LEWIN, R. A. (ed.)
1962. Physiology and Biochemistry of Algae. Academic Press, New York, 929 pp.

LEWIS, J. R.
1964. Ecology of Rocky Shores. English Universities Press, Ltd., London, 323 pp.

MACGINITIE, G. E. and N. MACGINITE
1949. Natural History of Marine Animals. McGraw-Hill Book Company, Incorporated, New York, 473 pp.

MOORE, H. B.
1958. Marine Ecology. John Wiley and Sons, New York, 493 pp.

NICOL, J. A. C.
1960. The Biology of Marine Animals. Interscience Publishers, New York, 707 pp.

OPPENHEIMER, C. H. (ed.)
1961. Symposium on Marine Microbiology. Chicago, Illinois, Thomas Printers, Springfield, Illinois, 769 pp.

EARSON, E. A. (ed.)
1960. Waste Disposal in the Marine Environment. Proceedings of the First International Conference, Pergamon Press, New York, 569 pp.

PROSSER, C. L. (ed.)
1952. Comparative Animal Physiology. W. B. Saunders Company, Philadelphia and London, 888 pp.

RAY, D. L. (ed.)
1959. Marine Boring and Fouling Organisms. University of Washington Press, Seattle, Washington, 584 pp.

RAYMONT, J. E.
1963. Plankton and Productivity in the Oceans. Pergamon Press, New York, 666 pp.

REID, G. K.
1961. Ecology of Inland Waters and Estuaries. Reinhold Publishing Corporation, New York, 375 pp.

REVELLE, R. *(Chairman)*
1957. The Effects of Atomic Radiation on Oceanography and Fisheries. National Academy of Sciences—National Research Council, Washington, D. C., Publication No. 551, 137 pp.

RUSSELL, F. S. (ed.)
1964. Advances in Marine Biology, Vol. 2. Academic Press, New York, 274 pp.

SEARS, M. (ed.)
1961. Oceanography. American Association for the Advancement of Science, Washington, Publication No. 67, 665 pp.

SMITH, G. M. (ed.)
1951. Manual of Phycology: An Introduction to the Algae and Their Biology. The Chronica Botanica Company, Waltham, Massachusetts, 375 pp.

STRICKLAND, J. D. H. and T. R. PARSONS
1960. A Manual of Sea Water Analysis. Fisheries Research Board of Canada, Bulletin No. 125, Queen's Printers, Ottawa, Canada, 185 pp.

STRICKLAND, J. D. H.
1960. Measuring the Production of Marine Phytoplankton. Fisheries Research Board of Canada Bulletin No. 122, 172 pp.

SVERDRUP, H. U., M. W. JOHNSON and R. H. FLEMING
1942. The Oceans, Their Physics, Chemistry, and General Biology. Prentice Hall, Inc., New York, 1087 pp.

WILBUR, K. M. and C. M. YONZE (eds.)
1964. Physiology of Mollusca. Vol. I. Academic Press. New York, 487 pp.

WOOD, E. J. F.
1965. Marine Microbial Ecology. Chapman and Hall, London, 243 pp.

YAPP, W. B. (ed.)
1959. Effects of Pollution on Living Material. Published by The Institute of Biology, London, England, 154 pp.

ZOBELL, C. E.
1946. Marine Microbiology. Chronica Botanica Company, Waltham, Massachusetts, 240 pp.

JOURNALS

ALLAN HANCOCK FOUNDATION PUBLICATIONS
University of Southern California Press, Los Angeles, California. *(Irregular)*

AMERICAN FISHERIES SOCIETY TRANSACTIONS
Allen Press, Lawrence, Kansas *(Quarterly)*

BIOLOGICAL BULLETIN
Official Publication of the Woods Hole Marine Biological Institution, Woods Hole, Massachusetts

BULLETIN OF MARINE SCIENCE OF THE GULF AND CARIBBEAN
The Marine Laboratory of the University of Miami, Miami, Florida *(Quarterly)*

BULLETIN OF THE BINGHAM OCEANOGRAPHIC COLLECTION
Peabody Museum of Natural History, Yale University, New Haven, Connecticut *(Annual)*

CALIFORNIA FISH AND GAME
California Division of Fish and Game, Berkeley, California *(Quarterly)*

CHESAPEAKE SCIENCE
National Resources Institute of the University of Maryland, Chesapeake Biological Laboratory, Solomons, Maryland *(Quarterly)*

DEEP SEA RESEARCH
Pergamon Press, New York *(Quarterly)*

ECOLOGICAL MONOGRAPHS
Official Publication of the Ecological Society of America, Duke University Press, Durham, North Carolina *(Quarterly)*

ECOLOGY
Official Publication of the Ecological Society of America, Duke University Press, Durham, North Carolina *(Bimonthly)*

ESTUARINE BULLETIN
University of Delaware Marine Laboratories, Newark, New Jersey *(Quarterly)*

INTERNATIONAL JOURNAL OF AIR AND WATER POLLUTION
Pergamon Press, New York *(Seven Issues Per Year)*

JOURNAL OF ANIMAL ECOLOGY
Blackwell Scientific Publications, Ltd., Oxford, England *(Three Issues Per Year)*

JOURNAL OF ECOLOGY
Blackwell Scientific Publications, Oxford, England *(Three Issues Per Year)*

JOURNAL OF THE FISHERIES RESEARCH BOARD OF CANADA
Official Publication of the Fisheries Research Board of Canada, Sir Charles Tupper Building, Ottawa, Ontario, Canada *(Bimonthly through 1965, Monthly Thereafter)*

JOURNAL OF MARINE RESEARCH
Sears Foundation for Marine Research, Bingham Oceanographic Laboratory, Yale University, New Haven, Connecticut *(Three Issues Per Year)*

JOURNAL OF THE MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM
Cambridge University Press, London, England *(Three Issues Per Year)*

JOURNAL OF THE SANITARY ENGINEERING DIVISION
Proceedings of the American Society of Civil Engineers, Ann Arbor, Michigan *(Bimonthly)*

JOURNAL OF THE WATER POLLUTION CONTROL FEDERATION
Washington, D. C. *(Monthly)* Formerly: Sewage Works Journal, vol.

1-21, 1928-1949; Sewage and Industrial Wastes, vol. 22-31, 1950-1959.

LIMNOLOGY AND OCEANOGRAPHY

American Society of Limnology & Oceanography, Baltimore, Maryland *(Quarterly)*

PACIFIC NATURALIST

Publication of the Beaudette Foundation for Biological Research, Solvang, California *(Irregularly)*

PROCEEDINGS OF THE NATIONAL SHELLFISHERIES ASSOCIATION

Official Publication of the National Shellfisheries Association, Duplicating Department, University of North Carolina, Chapel Hill, North Carolina *(Annual)*

PUBLIC HEALTH ENGINEERING ABSTRACTS

Public Health Service, Washington, D. C. *(Monthly)*

PUBLICATIONS OF THE INSTITUTE OF MARINE SCIENCE OF THE UNIVERSITY OF TEXAS, Port Aransas, Texas

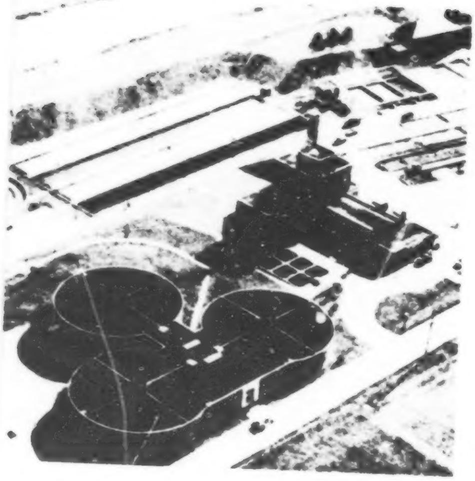
SPORT FISHERY ABSTRACTS

U. S. Department of the Interior, Fish and Wildlife Service, Washington, D. C. *(Quarterly)*

WATER POLLUTION ABSTRACTS

Her Majesty's Stationery Office, London, England *(Monthly)*

Activated sludge sewage treatment plant.



Waste stabilization pond.

Water purification plant.

Plate III—Waste Treatment and Water Treatment Aspects

PART III

WASTE TREATMENT AND WATER TREATMENT ASPECTS

SPECIFIC COMMUNITIES of plants and animals are associated with the various phases of decomposition in the biological treatment of wastes. Each of these communities is dependent on the other, and there is gradation of organisms from one community to another at various places in the system. Only those organisms adapted to the conditions for the stage of decomposition under consideration are to be found in abundance at any particular time and place in the decomposition processes.

In designing bio-chemical waste treatment facilities, engineers provide for an optimum physical habitat in which maximum biological decomposition can take place. These vary from imhoff tanks to waste stabilization ponds; each contains a particular assemblage of organisms. Early efforts to study the biological aspects of waste treatment facilities were concerned with the determination of types of organisms present in various treatment processes. Subsequent investigations dealt with the fate of specific organisms in activated sludge and trickling filter systems. Additional studies need to be undertaken to determine organism responses to operational changes within waste treatment facilities.

Unlike the role of organisms in waste treatment, most organisms in water supplies are detrimental, and considerable effort is devoted to providing organism-free water to consumers. Organisms in water supplies and delivery systems can cause discoloration, turbidity, undesirable tastes and odors, disease, plugging, and reduced flowage; their control often involves use of chemicals which in turn may affect the quality of water delivered to the consumer.

In recreational waters, sometimes employed as sources of water for many purposes, certain organisms are deemed beneficial because they are associated in one way or another with the pleasurable use of the water. Man-induced enrichment of such waters, however, often results in excessive growths of organisms which frequently achieve nuisance proportions and restrict or eliminate recreational use. The excessive development of organisms to nuisance proportions stimulates demands for appropriate control measures to retain potential recreational values. Proper control is only achieved by eliminating the cause of such growths, but this may not be feasible for economic or other

Preceding page blank

reasons, and chemical treatment may be undertaken. Unfortunately chemical treatment rarely provides complete satisfaction in the control of aquatic nuisance organisms, and often the chemical employed has adverse effects on other organisms considered beneficial in the resource.

WASTE TREATMENT

GENERAL REFERENCES

Agersborg, H. P. K. and W. D. Hatfield

1929. The Biology of a Sewage Treatment Plant—A Preliminary Survey—Decatur, Illinois. Sewage Works Journal, vol. 1, No. 4, pp. 411–424.

Barker, A.

1943. The Protozoa Fauna of Sewage Disposal Plants. The Naturalist, pp. 65–69.

Bogan, R. H.

1961. Removal of Sewage Nutrients by Algae. Public Health Reports, vol. 76, No. 4, pp. 301–308.

Calaway, W. T. and J. B. Lackey

1962. Waste Treatment Protozoa, Flagellata. University of Florida, College of Engineering, Florida Engineering Series No. 3, pp. 1–140.

Chanin, G.

1961. Fundamentals of Sludge Digestion. Part II. Biology and Operation. Water and Sewage Works, vol. 108, No. 3, pp. 85–88.

Cooke, W. B.

1954. Fungi in Polluted Water and Sewage. I. Literature Review. Sewage and Industrial Wastes, vol. 26, No. 4, pp. 539–549.

Cooke, W. B.

1954. Fungi in Polluted Water and Sewage. II. Isolation Technique. Sewage and Industrial Wastes, vol. 26, No. 5, pp. 661–674.

Culp, R. L.

1963. Wastewater Reclamation by Tertiary Treatment. Journal of Water Supply and Pollution Control, vol. 35, No. 6, pp. 799–806.

Gainey, P. L. and T. H. Lord

1952. Microbiology of Water and Sewage. Prentice-Hall, Incorporated, New York, 430 pp.

Gilcreas, F. W.

1952-53. Laboratory Control of Sewage Treatment, Chapter 11, Biology of Sewage Treatment, pp. 72–79. Case-Shepperd-Mann Publishing Corporation, New York, 92 pp.

Golucke, C. G. and W. J. Oswald

1965. Harvesting and Processing Sewage-Grown Planktonic Algae. Journal of the Water Pollution Federation, vol. 37, No. 4, pp. 471–498.

Hurwitz, E., R. Beaudoin and W. Walters

1965. Phosphates, Their Fate in a Sewage Treatment Plant-Waterway System. Water and Sewage Works, vol. 112, No. 3, pp. 84–89, 112.

Kabler, P. W.

1959. Removal of Pathogenic Microorganisms by Sewage Treatment Processes. Sewage and Industrial Wastes, vol. 31, No. 12, pp. 1373–1382.

Kabler, P. W.

1960. Selection and Adaptation of Microorganisms in Waste Treatment. American Journal of Public Health and the Nation's Health, vol. 50, No. 2, pp. 215–219.

Lackey, J. B.

1932. Oxygen Deficiency and Sewage Protozoa, with Descriptions of Some New Species. Biological Bulletin, vol. 63, No. 2, pp. 287–295.

Lackey, J. B.

1938. A Study of Some Ecological Factors Affecting the Distribution of

Protozoa. Ecological Monographs, vol. 8, No. 4, pp. 501-527.

Lackey, J. B.
1949. Biology of Sewage Treatment. Sewage Works Journal, vol. 21, No. 4, pp. 659–665.

Lackey, J. B.
1954. How the Biota of Sewage and Industrial Wastes Work for Us. Wastes Engineering, vol. 25, No. 12, pp. 592–595.

Lackey, J. B. and R. M. Dixon
1943. Some Biological Aspects of the Hays Process of Sewage Treatment. Sewage Works Journal, vol. 15, No. 6, pp. 1139–1152.

Lloyd, L. L.
1945. Animal Life in Sewage Purification Processes. Sewage Works Journal, vol. 17, No. 5, pp. 1056–1059.

Mackenthun, K. M., L. A. Lueschow and C. D. McNabb
1960. A Study of the Effects of Diverting the Effluent from Sewage Treatment Upon the Receiving Stream. Wisconsin Academy of Sciences, Arts and Letters, vol. 49, pp. 51–72.

Malaney, G. W., W. D. Sheets and P. Quillin
1959. Toxic Effects of Metallic Ions on Sewage Micro-organisms. Sewage and Industrial Wastes, vol. 31, No. 11, pp. 1309–1315.

Morris, G. L., L. Van Den Berg, G. L. Culp, J. R. Geckler and R. Porges
1963. Extended-Aeration Plants and Intermittent Watercourses. Public Health Service Publication No. 999–WP–8, pp. 1–51.

Purdy, W. C.
1937. Experimental Studies of Natural Purification in Polluted Waters. X. Reoxygenation of Polluted Waters by Microscopic Algae. Public Health Reports, vol. 52, No. 29, pp. 945–978.

Rowan, W. B.
1964. Sewage Treatment and Schistosome Eggs. American Journal of Tropical Medicine and Hygiene, vol. 13, pp. 527–576.

Rudolfs, W. and H. Heukelekian
1941. The Microbiology of Sewage and Sewage Treatment. In: A Symposium on Hydrobiology. University of Wisconsin Press, Madison, Wisconsin, pp. 273–279.

Rudolfs, W., L. L. Falk and R. A. Ragotzkie
1950. Literature Review on the Occurrence and Survival of Enteric, Pathogenic, and Relative Organisms in Soil, Water, Sewage, and Sludges, and on Vegetation. I. Bacterial and Virus Diseases. Sewage and Industrial Wastes, vol. 22, No. 10, pp. 1261–1281. II. Animal Parasites, Sewage and Industrial Wastes, vol, 22, No. 11, pp. 1417–1427.

Sawyer, C. N.
1944. Biological Engineering in Sewage Treatment. Sewage Works Journal, vol. 16, No. 5, pp. 925-935.

Smit, J.
1948. Microbiology of Drinking Water and Sewage. Annual Reviews of Microbiology, pp. 435-452.

Sugden, B. and L. Loyd
1950. Clearing of Turbid Waters by Means of the Ciliate Carchesium. Journal of the Institute of Sewage Purification (London), vol. 1, No. 1, pp. 16–23.

Tomlinson, T. G.
1939. The Biology of Sewage Purification. The Surveyor, vol. 95, No. 2469, pp. 655–658.

Wilson, J. N.
1949. Microbiota of Sewage Treatment Plants and Polluted Streams. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 1–15.

IMHOFF TANKS

Hausman, L. A.
1923. Preliminary Studies on the Fauna of Imhoff Tanks. American Journal of Public Health, vol. 13, No. 8, pp. 656–658.

Hausman, L. A.
1923. Studies on the Fauna of the Sprinkling Filter Bed and Imhoff Tanks. New Jersey Agricultural Experiment Station, Bulletin 390, pp. 28–29.

LACKEY, J. B.

1924. Fauna of Imhoff Tanks and Sprinkling Filters. New Jersey Agricultural Experiment Station, Bulletin 403, pp. 40–60.

LACKEY, J. B.

1925. The Fauna of Imhoff Tanks. New Jersey Agricultural Experiment Station, Bulletin 417, pp. 1–39.

LACKEY, J. B.

1926. Kinds, Distribution, and Fluctuations of Protozoa in Imhoff Tanks. New Jersey Agricultural Experiment Station, Bulletin 427, pp. 30–41.

RUDOLFS, W., F. L. CAMPBELL, M. HOTCHKISS and J. B. LACKEY

1924. Digestion of Fresh Solids. New Jersey Agricultural Experiment Station, Bulletin 403, pp. 60–81.

RUDOLFS, W. and J. B. LACKEY

1924. Digestion of Fresh Solids Contaminated with Partially Digested Material. New Jersey Agricultural Experiment Station, Bulletin 403, pp. 89–91.

RUDOLFS, W., M. HOTCHKISS, A. J. FISCHER and J. B. LACKEY

1926. Studies on Fresh Solids Digestion. New Jersey Agricultural Experiment Station, Bulletin 427, pp. 50–74.

RUDOLFS, W., H. HEUKELEKIAN, P. J. A. ZELLER and J. B. LACKEY

1926. The Relation Between Ripe Sludge and Fresh Solids and the Effects of "Washing" on Digestion. New Jersey Agricultural Experiment Station, Bulletin 427, pp. 74–86.

FILTERS

BARTSCH, A. F.

1961. Algae as a Source of Oxygen in Waste Treatment. Sewage and Industrial Wastes, vol. 33, No. 3, pp. 239–249.

BROWN, T. F.

1937. The Biology of *Physa anatina* Lea, a Snail Living in a Sewage Treatment Plant. American Midland Naturalist, vol. 18, No. 2, pp. 251–259.

BUTTERFIELD, C. T. and E. WATTIE

1941. Studies on Sewage Purification. XV. Effective Bacteria in Purification by Trickling Filters. Public Health Reports, vol. 56, No. 52, pp. 2445–2464.

CALAWAY, W. T.

1957. Intermittent Sand Filters and their Biology. Sewage and Industrial Wastes, vol. 29, No. 1, pp. 1–5.

COOKE, W. B.

1953. Mosses in a Sewage Treatment Plant. The Bryologist, vol. 56, No. 2, pp. 143–145.

COOKE, W. B.

1958. Continuous Sampling of Trickling Filter Populations. Sewage and Industrial Wastes, vol. 30, No. 1, pp. 21–27.

COOKE, W. B.

1959. Fungi in Polluted Water and Sewage. IV. The Occurrence of Fungi in a Trickling Filter-type Sewage Treatment Plant. Proceedings of the 13th Industrial Waste Conference, Purdue University, Series No. 96, vol. 43, No. 3, pp. 26–45.

COOKE, W. B.

1959. Trickling Filter Ecology. Ecology, vol. 40, No. 2, pp. 273–291.

CROZIER, W. J.

1923. On Abundance and Diversity of the Protozoan Fauna of a Sewage Filter. Science, vol. 48, pp. 424–425.

CROZIER, W. J.

1923. Animal Population of a Sewage Sprinkling Filter. Preliminary Report. New Jersey Agricultural Experiment Station, 43rd Annual Report, pp. 503–516.

CUTLER, D. W., L. M. CRUMP and A. DIXON

1932. Some Factors Influencing the Distribution of Certain Protozoa in Biological Filters. Journal of Animal Ecology, vol. 1, No. 2, pp. 143–151.

FELDMAN, A. E.

1955. Fungi from Trickling Filters. Sewage and Industrial Wastes, vol. 27, No. 11, pp. 1243–1244.

FRYE, W. W. and E. R. BECKER

1929. The Fauna of an Experimental Trickling Filter. Sewage Works Journal, vol. 1, No. 3, pp. 286-308.

Haenseler, C. M., W. P. Moore and J. G. Gains
1923. Fungi and Algae of Sprinkling Filters. New Jersey Agricultural Experiment Station, Bulletin No. 390, pp. 39–48.

Hausman, L. A.
1923. Studies on the Fauna of the Sprinkling Filter Bed and Imhoff Tanks. New Jersey Agricultural Experiment Station, Bulletin No. 390, pp. 28–39.

Hesseltine, C. W.
1953. Study of Trickling Filter Fungi. Bulletin of the Torrey Botanical Club, vol. 80, No. 6, pp. 507–514.

Heukelekian, H.
1945. The Relationship Between Accumulation, Biochemical and Biological Characteristics of Film and Purification Capacity of a Biofilter and a Standard Filter. I. Film Accumulation. Sewage Works Journal, vol. 17, No. 1, pp. 23–38. II. Biochemical Characteristics of the Film. Sewage Works Journal, vol. 17, No. 2, pp. 269–291.

Holtje, R. H.
1943. The Biology of Sewage Sprinkling Filters. Sewage Works Journal, vol. 15, No. 1, pp. 14–29.

Ingram, W. M., W. B. Cooke and L. T. Hagerty
1958. Snails Associated with Sewage Treatment Installations. Sewage and Industrial Wastes, vol. 30, No. 6, pp. 821–825.

Lackey, J. B.
1924. Fauna of Imhoff Tanks and Sprinkling Filters. New Jersey Agricultural Experiment Station, Bulletin No. 403, pp. 40–60.

Lackey, J. B.
1926. Sprinkling Filter Bed Studies. New Jersey Agricultural Experiment Station, Bulletin No. 427, pp. 41–50.

Lloyd, L., J. F. Graham and T. B. Reynoldson
1940. The Fauna of the Sewage Bacteria Beds. Annals of Applied Biology, vol. 27, No. 1, pp. 122–150.

Lloyd, L. L.
1945. Sewage Bacteria Bed Fauna in Its Natural Setting. Abst., Sewage Works Journal, vol. 17, No. 4, p. 859.

Lohmeyer, G. T.
1953. Trickling Filter Roach Invasion. Sewage and Industrial Wastes, vol. 25, No. 9, pp. 1104–1107.

Lohmeyer, G. T.
1955. Snails in the Trickling Filter. Sewage and Industrial Wastes, vol. 27, No. 3, pp. 337–338.

Lohmeyer, G. T.
1957. Trickling Filters and Operation Tips. Sewage and Industrial Wastes, vol. 29, No. 1, pp. 89–98.

Painter, H. A.
1954. Factors Affecting the Growth of Some Fungi Associated with Sewage Purification. Journal of General Microbiology, vol. 10, No. 1, pp. 177–190.

Reynoldson, T. B.
1939. The Role of Macro-Organisms in Bacteria Beds. The Surveyor, vol. 95, pp. 279–281.

Reynoldson, T. B.
1941. The Biology of Macro-Fauna of a High Rate Double Filtration Plant at Huddersfield. Proceedings of the Institute of Sewage Purification (London), pp. 1–16.

Reynoldson, T. B.
1944. Further Studies on the Biology of a Double Filtration Plant at Huddersfield. Abst., Sewage Works Journal, vol. 16, No. 3, pp. 663–664.

Rudolfs, W.
1924. Film Removal Studies. New Jersey Agricultural Experiment Station, Bulletin No. 403, pp. 91–95.

Rudolfs, W. and H. A. Trajkovich
1924. Fungi and Algae of the Sprinkling Filter Bed and Their Distribution. New Jersey Agricultural Experiment Station, Bulletin No. 403, pp. 82–84.

Stanbridge, H. H.
1955. The Development of Biological Filtration. Water and Sanitary Engineer, vol. 5, No. 6, pp. 252–255.

Tomlinson, T. G.
1942. The Treatment of Settled Sewage in Percolating Filters in Series, with Periodic Changes in the Order of Filters. Biological Investigations, 1938-41. Abst., Sewage Works Journal, vol. 14, No. 5, pp. 1154–1155.

TOMLINSON, T. G.

1942. Some Aspects of Microbiology in the Treatment of Sewage. Journal of the Society of Chemical Industries, Transcripts and Communications, vol. 61, pp. 53–58.

USINGER, R. L. and W. R. KELLEN

1955. The Role of Insects in Sewage Disposal Beds. Hilgardia (a Journal of Agricultural Sciences published by the California Agricultural Experiment Station), vol. 23, No. 10, pp. 263–321.

WALTON, G. L. F. WARRICK and J. WILSON

1943. High Daily Rate Trickling Filter Performance. Board of Health Commissioners, Upper Mississippi River Basin Sanitation Agreement (Wisconsin, Minnesota, Illinois, Iowa, Indiana, Missouri), pp. 1–136.

WATTIE, E.

1942. Cultural Characteristics of Zoogleal-Forming Bacteria Isolated from Activated Sludge and Trickling Filters. Public Health Reports, vol. 57, No. 41, pp. 1519–1534.

ACTIVATED SLUDGE

BAINES, S., H. A. HAWKES, C. H. HEWITT and S. H. JENKINS

1953. Protozoa as Indicators in Activated Sludge Treatment. Sewage and Industrial Wastes, vol. 25, No. 9, pp. 1023–1033.

BARRITT, N. W.

1940. The Ecology of Activated Sludge in Relation to Its Properties and the Isolation of a Specific Soluble Substance from the Purified Effluent. Annals of Applied Biology, vol. 27, No. 1, pp. 151–156.

BUCK, T. C. and C. E. KEEFER

1959. Studies of a Zoogleal Forming Organism Found in Activated Sludge. Sewage and Industrial Wastes, vol. 31, No. 11, pp. 1267–1274.

BUSWELL, A. M.

1920–22. Microbiology of Activated Sludge. Illinois State Water Supply Bulletin, vol. 18, pp. 26, 82–92.

BUSWELL, A. M. and H. L. LONG

1923. Microbiology and Theory of Activated Sludge. Journal of the American Water Works Association, vol. 10, No. 2, pp. 309–321.

BUSWELL, A. M.

1931. The Biology of Activated Sludge—An Historical Review. Sewage Works Journal, vol. 3, No. 3, pp. 362–368.

BUTTERFIELD, C. T., W. C. PURDY and E. J. THERIAULT

1931. Experimental Studies of Natural Purification in Polluted Waters. IV. The Influence of the Plankton on the Biochemical Oxidation of Organic Matter. Public Health Reports, vol. 46, No. 8, pp. 393–426.

BUTTERFIELD, C. T., W. C. PURDY and E. J. THERIAULT

1935. Studies of Sewage Purification. II. A Zooglea-Forming Bacterium Isolated from Activated Sludge. Public Health Reports, vol. 50, No. 20, pp. 671–684.

BUTTERFIELD, C. T.

1934–35. Biological and Bacteriological Relationships in Water Purification and Sewage Treatment. Biennial Report of 1934–35, Three Day Water and Sewage Works Schools. Kansas Water and Sewage Works Association, vol. 4, pp. 106–109.

CRAMER, R.

1931. The Role of Protozoa in Activated Sludge. Industrial and Engineering Chemistry, vol. 23, pp. 309–313.

HEUKELEKIAN, H. and M. BURBAXANI

1949. Effect of Certain Physical and Chemical Agents on the Bacteria and Protozoa of Activated Sludge. Sewage Works Journal, vol. 21, No. 5, pp. 811–817.

JACKSON, R. B.

1943. The Chironomid Fly and Its Effect on the Activated Sludge Process. Michigan Sewage Works Association, Engineering Experiment Station, Bulletin No. 98, pp. 42–44.

LACKEY, J. B. and E. WATTIE

1940. Studies of Sewage Purification. XIII. The Biology of *Sphaerotilus natans* Kutzing in Relation to Bulking of Activated Sludge. Public Health Reports, vol. 55, No. 22, pp. 975–987.

Manganelli, R. and E. S. Crosby
1953. Effect of Detergents on Sewage Microorganisms. Sewage and Industrial Wastes, vol. 25, No. 3, pp. 262–276.

McKinney, R. E. and A. Gram
1956. Protozoa and Activated Sludge. Sewage and Industrial Wastes, vol. 28, No. 10, pp. 1219–1231.

Morgan, E. H. and A. J. Beck
1928. Carbohydrate Wastes Stimulate Growth of Undesirable Filamentous Organisms in Activated Sludge. Sewage Works Journal, vol. 1, No. 1, pp. 46–51.

Pillai, S. C. and V. S. Subrahmanyan
1944. Role of Protozoa in the Aerobic Purification of Sewage. Nature, vol. 154, pp. 179–180.

Pillai, S. C., A. Prabhakara, U. S. Rad and G. J. Mohan
1953. Effect of Certain Antibiotics on Activated Sludge. Science and Culture (India). vol. 18, pp. 15–45.

Pipes, W. O. and P. H. Jones
1963. Decomposition of Organic Wastes by *Sphaerotilus*. Bioengineering and Biotechnology, vol. 5, No. 4, pp. 287–307.

Reynoldson, T. B.
1942. Vorticella as an Indicator Organism for Activated Sludge. Nature, vol. 149, pp. 608–609.

Ruchhoft, C. C. and J. H. Watkins
1928. Bacteriological Isolation and Study of the Filamentous Organisms in the Activated Sludge of the Des Plaines River Sewage Treatment Works. Sewage Works Journal, vol. 1, No. 1, pp. 52–58.

Ruchhoft, C. C. and J. F. Kachmar
1941. Studies of Sewage Purification. XIV. The Role of *Sphaerotilus natans*, in Activated Sludge Bulking. Public Health Reports, vol. 56, No. 35, pp. 1727–1757.

Smit, J.
1934. Bulking of Activated Sludge. II. On the Causative Organisms. Sewage Works Journal, vol. 6, No. 6, pp. 1041–1053.

Wattie, E.
1942. Cultural Characteristics of Zoogleal-Forming Bacteria Isolated from Activated Sludge and Trickling Filters. Public Health Reports, vol. 57, No. 41, pp. 1519–1534.

Woodard, F. E., O. J. Sproul and P. F. Atkins, Jr.
1964. The Biological Degradation of Lignin From Pulp Mill Black Liquor. Journal of the Water Pollution Control Federation, vol. 36, No. 11, pp. 1401–1410.

WASTE STABILIZATION PONDS

Allen, M. B.
1955. General Features of Algae Growth in Sewage Oxidation Ponds. State Water Pollution Control Board, Sacramento, California, Publication No. 13, pp. 1–47.

Anderegg, J. A., C. F. Walters, D. Hilliard and H. F. Meyers
1960. "Eskimo" Algae Make Lagoons Work at the Arctic Circle. Wastes Engineering, vol. 31, No. 6, pp. 324–326.

Bartsch, A. F. and M. O. Allum
1957. Biological Factors in Treatment of Raw Sewage in Artificial Ponds. Limnology and Oceanography, vol. 2, No. 2, pp. 77–84.

Bartsch, A. F.
1961. Algae as a Source of Oxygen in Waste Treatment. Sewage and Industrial Wastes, vol. 33, No. 3, pp. 239–249.

Beadle, L. D. and F. C. Harmston
1958. Mosquitoes in Sewage Stabilization Ponds in the Dakotas. Mosquito News, vol. 18, No. 12, pp. 293–296.

Caldwell, D. H.
1946. Sewage Oxidation Ponds—Performance, Operation, and Design. Sewage Works Journal, vol. 18, No. 3, pp. 433–458.

Cooke, W. B. and M. S. Matsuura
1963. A Study of Yeast Populations in a Waste Stabilization Pond System. Protoplasma, vol. 57, Nos. 1–4, pp. 11–187.

Copeland, B. J. and T. C. Dorris
1964. Community Metabolism in Ecosystems Receiving Oil Refinery Efflu-

ents. Limnology and Oceanography, vol. 9, No. 3, pp. 431-447.

Davis, W. H.
1955. Sewage Lagoons in the Dakotas. Official Bulletin of the North Dakota Water and Sewage Works Conference, vol. 23, Nos. 4 and 5, pp. 5–6, 12.

Ehlers, V. M.
1954. Oxidation Ponds—Their Application and Potentials. Official Bulletin of the North Dakota Water and Sewage Works Conference, vol. 22, No. 3, pp. 14–15, 17.

Eppley, R. W. and F. M. Marcias
1963. Role of the Alga *Chlamydomonas mundana* in Anaerobic Waste Stabilization Lagoons. Limnology and Oceanography, vol. 8, No. 4, pp. 411–416.

Fisher, C. P. and E. F. Gloyna
1965. Treatment of Activated Sludge in Stabilization Ponds. Journal of the Water Pollution Control Federation, vol. 37, No. 11, pp. 1511–1520.

Fitzgerald, G. P. and G. A. Rohlich
1958. An Evaluation of Stabilization Pond Literature. Sewage and Industrial Wastes, vol. 30, No. 10, pp. 1213–1224.

Gaur, A. C., W. O. Pipes, Jr. and H. B. Gotaas
1960. Culture of *Oscillatoria* in Organic Wastes. Journal of the Water Pollution Control Federation, vol. 32, No. 10, pp. 1060–1065.

Gehm, H. W.
1963. The Application of Stabilization Ponds in the Purification of Pulp and Paper Mill Wastes. Journal of the Water Pollution Control Federation, vol. 35, No. 9, pp. 1174–1180.

Oswald, W. J., C. G. Golueke, R. C. Cooper, H. K. Gee and J. C. Bronson
1963. Water Reclamation, Algal Production and Methane Fermentation in Waste Ponds. International Journal of Air and Water Pollution, vol. 7, Nos. 6–7, pp. 627–648.

Hermann, E. R. and E. F. Gloyna
1958. Water Stabilization Ponds. I. Experimental Investigations. Sewage and Industrial Wastes, vol. 30, No. 4, pp. 511–538.

Hermann, E. R. and E. F. Gloyna
1958. Waste Stabilization Ponds. II. Field Practices. Sewage and Industrial Wastes, vol. 30, No. 5, pp. 646–651.

Hermann, E. R. and E. F. Gloyna
1958. Waste Stabilization Ponds. III. Formulation of Design Equations. Sewage and Industrial Wastes, vol. 30, No. 8, pp. 963–975.

Hermann, E. R.
1962. Stabilization Pond as a Nitrate Reducing Reactor. Proceedings of the American Society of Civil Engineers, Journal of the Sanitary Engineering Division, vol. 88, No. SA5, Part 1, pp. 1–20.

Hopkins, G. J.
1956. Raw Sewage Lagoons. Water and Sewage Works, vol. 103, No. 8, pp. 566–570.

Horning, W. B., II, R. Porges, H. F. Clarke and W. B. Cooke
1964. Waste Stabilization Pond Study, Lebanon, Ohio. U. S. Public Health Service, Publication No. 999–WP–16, pp. 1–48.

Kabler, P. W.
1959. Removal of Pathogenic Microorganisms by Sewage Treatment Processes. Sewage and Industrial Wastes, vol. 31, No. 12, pp. 1373–1382.

Ludwig, H. F., W. J. Oswald, H. B. Gotaas and V. Lynch
1951. Algae Symbiosis in Oxidation Ponds. I. Growth Characteristics of *Euglena gracilis* Cultured in Sewage. Sewage and Industrial Wastes, vol. 23, No. 11, pp. 1337–1355.

Mackenthun, K. M. and C. D. McNabb
1961. Stabilization Pond Studies in Wisconsin. Journal of the Water Pollution Control Federation, vol. 33, No. 12, pp. 1234–1251.

Maloney, T. E., H. F. Ludwig, J. A. Harmon and L. McClintock
1960. Effect of Whey Wastes on Stabilization Ponds. Journal of the Water Pollution Control Federation, vol. 32, No. 12, pp. 1283–1299.

Malina, J. F., Jr. and Y. A. Yousef
1964. The Fate of Coliform Organisms in Waste Stabilization Ponds. Journal of the Water Pollution Control Federation, vol. 36, No. 11, pp. 1430–1442.

Merz, R. C., J. C. Merrell and R. Stone

1957. Investigation of Primary Lagoon Treatment at Mojave, California. Sewage and Industrial Wastes, vol. 29, No. 2, pp. 115–123.

Myklebust, R. J. and F. C. Harmston

1962. Mosquito Production in Stabilizing Ponds. Journal of the Water Pollution Control Federation, vol. 34, Part I, pp. 302–306.

Neel, J. K. and G. J. Hopkins

1956. Experimental Lagooning of Raw Sewage. Sewage and Industrial Wastes, vol. 28, No. 11, pp. 1326–1356.

Neel, J. K., J. H. McDermott and C. A. Monday, Jr.

1961. Experimental Lagooning of Raw Sewage at Fayette, Missouri. Journal of the Water Pollution Control Federation, vol. 33, No. 6, pp. 603–641.

Oswald, W. J., H. B. Gotaas, H. F. Ludwig and V. Lynch

1953. Algae Symbiosis in Oxidation Ponds. II. Growth Characteristics of *Chlorella pyrenoidosa* Cultured in Sewage. Sewage and Industrial Wastes, vol. 25, No. 1, pp. 26–37.

Oswald, W. J., H. B. Gotaas, H. F. Ludwig and V. Lynch

1953. Algae Symbiosis in Oxidation Ponds. III. Photosynthetic Oxygenation. Sewage and Industrial Wastes, vol. 25, No. 6, pp. 692–705.

Oswald, W. J. and H. B. Gotaas

1955. Photosynthesis in Sewage Treatment. Proceedings of the American Society of Civil Engineers, vol. 81, Separate No. 686, pp. 1–27.

Oswald, W. J., H. B. Gotaas, C. G. Golueke and W. R. Kellen

1957. Algae in Waste Treatment. Sewage and Industrial Wastes, vol. 29, No. 4, pp. 437–457.

Oswald, W. J., C. G. Golueke, R. C. Cooper, H. K. Gee and J. C. Bronson

1963. Water Reclamation, Algal Production, and Methane Fermentation in Waste Ponds. International Journal of Air and Water Pollution, vol. 7, Nos. 6–7, pp. 627–648.

Panagiotou, A. J. and H. K. Williford

1965. Sludge Accumulation in Municipal Sewage Lagoons. Water and Sewage Works, vol. 112, No. 1, pp. 63–68.

Parker, C. D., H. L. Jones and W. S. Taylor

1950. Purification of Sewage in Lagoons. Sewage and Industrial Wastes, vol. 22, No. 6, pp. 760–775.

Parker, C. D., H. L. Jones and N. C. Greene

1959. Performance of Large Sewage Lagoons at Melbourne, Australia. Sewage and Industrial Wastes, vol. 31, No. 2, pp. 133–152.

Parker, C. D.

1962. Microbiological Aspects of Lagoon Treatment. Journal of the Water Pollution Control Federation, vol. 34, No. 2, pp. 149–161.

Pipes, W. O., Jr.

1961. Basic Biology of Stabilization Ponds. Water and Sewage Works, vol. 108, No. 4, pp. 131–136.

Pipes, W. O., Jr.

1961. Algae Growth Rate. Water and Sewage Works, vol. 108, No. 5, pp. 176–179.

Porges, R. and K. M. Mackenthun

1963. Waste Stabilization Ponds: Use, Function, and Biota. Biotechnology and Bioengineering, vol. 5, No. 4, pp. 255–273.

Rapp, W. F., Jr. and C. Emil

1965. Mosquito Production in a Eutrophic Sewage Stabilization Lagoon. Journal of the Water Pollution Control Federation, vol. 37, No. 6, pp. 867–870.

Sampson, E. O.

1955. A Double Duty Oxidation Pond. Sewage and Industrial Wastes, vol. 27, No. 12, pp. 1410–1415.

Silva, P. C. and G. F. Papenfuss

1953. A Systematic Study of the Algae of Sewage Oxidation Ponds. State Water Pollution Control Board, Sacramento, California, Publication No. 7, pp. 1–35.

Smallhorst, D. F., B. N. Walton and J. Meyers

1953. Design and Application of Oxidation Ponds. Public Works, vol. 84, No. 2, pp. 89–90; 111–114.

STEEL, E. W. and E. F. GLOYNA
1955. Concentration of Radioactivity in Oxidation Ponds. Sewage and Industrial Wastes, vol. 27, No. 8, pp. 941–956.

TOWNE, W. W. and W. H. DAVIS
1957. Sewage Treatment by Raw Sewage Stabilization Ponds. Journal of the Sanitary Engineering Division, Proceedings of the American Society of Civil Engineers, Paper 1337, SA-4:1337, pp. 1–17.

TOWNE, W. W., A. F. BARTSCH and W. H. DAVIS
1957. Raw Sewage Stabilization Ponds in the Dakotas. Sewage and Industrial Wastes, vol. 29, No. 4, pp. 377–396.

TUBB, R. A. and T. C. DAVIS
1965. Herbivorous Insect Populations in Oil Refinery Effluent Holding Pond Series. Limnology and Oceanography, vol. 10, No. 1, pp. 121–134.

VAN HEUVELEN, W. and J. H. SVORE
1954. Sewage Lagoons in North Dakota. Sewage and Industrial Wastes, vol. 26, No. 6, pp. 771–776.

SEWER PIPES

BEARDSLEY, C. W.
1949. Suppression of Sewer Slimes. Sewage Works Journal, vol. 21, No. 1, pp. 1–12.

DEMARTINI, F. E.
1934. Slime Growths in Sewers. Sewage Works Journal, vol. 6, No. 5, pp. 950–955.

HALL, J. W.
1927. Fungus Growths in Sanitary Sewers. Water Works, vol. 66, No. 5, pp. 177–178.

PARASITES AND SEWAGE TREATMENT

ABBOTT, A. L.
1947. Grazing of Cattle on Sewage Farms and Disposal Works. Journal and Proceedings of the Institute of Sewage Purification (London), Pt. 2, p. 198.

CHANG, S. L.
1949. Some Epidemiological and Biological Problems in Water-borne Amoebiasis. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 16-30.

CLARK, R. N.
1946. The Transmission of Disease by Sewage. Sewage Works Journal, vol. 18, No. 6, pp. 1138-1143.

CRAM, E. B.
1943. The Effect of Various Treatment Processes on the Survival of Helminth Ova and Protozoan Cysts in Sewage. Sewage Works Journal, vol. 15, No. 6, pp. 1119–1138.

CRAM, E. B. and D. O. HICKS
1944. The Effect of Sludge Digestion, Drying and Supplemental Treatment of Eggs of *Ascaris lumbricoides*. Proceedings of the Helminthological Society of Washington, vol. 11, No. 1, pp. 1–9.

JONES, M. F., W. L. NEWTON, S. R. WEIBEL, et al.
1947. The Effects of Sewage Treatment Processes on Ova and Miracidia of *Schistosoma japonicum*. Studies on Schistosomiasis, National Institute of Health Bulletin, 189, pp. 137–172.

MILLS, R., C. L. BARTLETT and J. F. KESSEL
1925. The Penetration of Fruits and Vegetables by Bacteria - Protozoan Cysts and Helminth Ova to Common Disinfection Methods. American Journal of Hygiene, vol. 5, No. 5, pp. 559–579.

MURRAY, H. M.
1960. The Incidence of Ascaris Ova in Pretoria Sludge and Their Reduction by Storage (Maturation) in Large Heaps. Journal and Proceedings of the Institute of Sewage Purification (London), Pt. 3, pp. 337–344.

NEWTON, W. L., H. BENNETT and W. D. FIGGAT
1949. Observations on the Effects of Various Sewage Treatment Processes Upon Eggs of *Taenia saginata*. American Journal of Hygiene, vol. 49, No. 2, pp. 166–175.

ORENSTEIN, A. J.

1949. A Contribution to the Discussion on the Hazard of Ascaris Infestation from Sewage. Journal of the Institute of Sewage Purification (London), Pt. 4, pp. 481–483.

ROBINSON, M. C.

1947. Grazing of Cattle on Sewage Farms. Journal and Proceedings of the Institute of Sewage Purification (London), Pt. 2, p. 194.

RUDOLFS, W., L. L. FALK and R. A. RAGOTZKIE

1950. Literature Review on the Occurrence and Survival of Enteric, Pathogenic, and Relative Organisms in Soil, Water, Sewage, and Sludges, and on Vegetation. II. Animal Parasites. Sewage and Industrial Wastes, vol. 22, No. 11, pp. 1417–1427.

RUDOLFS, W., L. L. FALK and R. A. RAGOTZKIE

1951. Contamination of Vegetables Grown in Polluted Soil. II. Field and Laboratory Studies on Endamoeba Cysts. Sewage and Industrial Wastes, vol. 23, No. 4, pp. 478–485.

RUDOLFS, W., L. L. FALK and R. A. RAGOTZKIE

1951. Contamination of Vegetables Grown in Polluted Soil. V. Helminthic Decontamination. Sewage and Industrial Wastes, vol. 23, No. 7, pp. 853–860.

SILVERMAN, P. H. and K. GUIVER

1960. Survival of Eggs of *Taenia saginata* (The Human Beef Tapeworm) After Mesophilic Anaerobic Digestion. Journal and Proceedings of the Institute of Sewage Purification (London), Pt. 3, pp. 345–347.

WANG, W. L. L. and S. G. DUNLOP

1954. Animal Parasites in Sewage and Irrigation Water. Sewage and Industrial Wastes, vol. 26, No. 8, pp. 1020–1032.

WILSON, H.

1945. Some Risks of Transmission of Disease During the Treatment, Disposal and Utilization of Sewage, Sewage Effluent and Sewage Sludge. Abst., Sewage Works Journal, vol. 17, No. 3, pp. 650–652.

WOLF, H. W.

1955. Housefly Breeding in Sewage Sludge. Sewage and Industrial Wastes, vol. 27, No. 2, pp. 172–176.

WRIGHT, W. H., E. B. CRAM and M. O. NOLAN

1942. Preliminary Observations on the Effect of Sewage Treatment Processes on the Ova and Cysts of Intestinal Parasites. Sewage Works Journal, vol. 14, No. 6, pp. 1274–1280.

NUISANCE ORGANISMS AND THEIR CONTROL

ANON.

1946. Filter Fly Control by DDT. Sewage Works Journal, vol. 18, No. 2, pp. 330–331.

ANON.

1952. Alum for Fly Control in Drying Sludge. Sewage and Industrial Wastes, vol. 24, No. 1, p. 107.

BROTHERS, W. C.

1946. Experiments with DDT in Filter Fly Control. Sewage Works Journal, vol. 18, No. 2, pp. 181–207.

CAROLLO, J. A.

1946. Control of Trickling Filter Flies with DDT. Sewage Works Journal, vol. 18, No. 2, pp. 208–211.

CONN, L. A.

1954. Waukegan's Weed-free Sludge Beds. Water and Sewage Works, vol. 101, No. 6, pp. 284–285.

DAVIES, D. F.

1949. Recent Development in Synthetic Insecticides with Special Reference to Gammexane. Journal and Proceedings of the Institute of Sewage Purification (London), p. 58.

DERUITER, H.

1960. Control of Psychoda Flies. Water and Sewage Works, vol. 107, No. 6, pp. 211–213.

FAIR, G. M.

1934. The Trickling Filter Fly *(Psychoda alternata)*. Its Habits and Control. Sewage Works Journal, vol. 6, No. 5, pp. 966–981.

FREE, G. N.

1959. How to Kill Psychoda. Wastes Engineering, vol. 30, No. 8, pp. 452–453.

Frye, W. W., M. Levine and E. R. Becker

1931. The Effects of Some Insecticides on the Sewage Sprinkling-Filter Fly, *Psychoda alternata*. Sewage Works Journal, vol. 3, No. 3, pp. 345–351.

Gary, L.

1950. Controlling Sewer Insects and Sewer Odors. Public Works, vol. 81, No. 6, pp. 1–48.

Ginsburg, J. M. and L. Forman

1930. Preliminary Studies on Causes and Remedies for Mosquito Breeding in Sewage Disposal Plants. Sewage Works Journal, vol. 2, No. 3, pp. 412–418.

Golightly, W. H.

1940. Factors Influencing the Abundance and Size of Psychoda Species in Sewage Bacteria Beds. Annals of Applied Biology, vol. 27, pp. 406–421.

Hawkes, H. A.

1951. A Study of the Biology and Control of *Anisopus fenestralis* (Scopoli 1763), a Fly Associated with Sewage Filters. Annals of Applied Biology, vol. 38, No. 3, pp. 592–605.

Hawkes, H. A.

1954. The Ecology of *Anisopus fenestralis* Scop. (Diptera) in Sewage Bacteria Beds. Annals of Applied Biology, vol. 39, No. 2, pp. 181–191.

Hawkes, H. A.

1955. The Effects of Insecticide Treatment on the Macrofauna Populations, Film Accumulation and Efficiency of Sewage Percolating Filters. Annals of Applied Biology, vol. 43, pp. 122–133.

Herms, W. B.

1930. Fly Control at Sewage Treatment Plants. Sewage Works Journal, vol. 2, No. 1, pp. 115–119.

Hommon, C. C.

1930. The Control of Algae and Filter Flies in Trickling Filters. The American City, vol. 43, No. 2, p. 11.

Hood, J. W.

1949. Successful Filter Fly Control. Public Works, vol. 80, No. 5, pp. 39, 80.

Hood, J. W.

1949. How to Control Psychoda Flies in Sewage Treatment Plants. The American City, vol. 64, No. 5, pp. 136–137.

Jackson, R. B.

1943. The Chironomid Fly and Its Effects on the Activated Sludge Process. Michigan Sewage Works Association, Engineering Experiment Station, Bulletin No. 98, pp. 42–44.

Jenkins, S. H., S. Baines and H. A. Hawkes

1949. The Control of *Anisopus fenestralis* (Diptera) and Factors Influencing the Numbers Caught in Surface Traps. Journal and Proceedings of the Institute of Sewage Purification (London), vol. 2, p. 178.

Jenkins, S. H., S. Baines and H. A. Hawkes

1949. The Control of *Anisopus fenestralis*. Surveyor, vol. 108, p. 298.

Livingston, A. M.

1951. Trickling Filter Fly Control. Sewage and Industrial Wastes, vol. 23, No. 2, pp. 241–244.

Lohmeyer, G. T.

1953. Trickling Filter Roach Invasion. Sewage and Industrial Wastes, vol. 25, No. 9, pp. 1104–1107.

Lohmeyer, G. T.

1955. Snails in the Trickling Filter. Sewage and Industrial Wastes, vol. 27, No. 3, pp. 337–338.

Malone, J. R. and J. S. Welch

1961. How to Control Psychoda. Wastes Engineering, vol. 32, No. 8, pp. 412–413, 418.

Murray, K. A.

1940. The Control of Filter Flies on Percolating Filters. Abst. Sewage Works Journal, vol. 12, No. 3, p. 645.

Myette, C. F.

1959. Weed Killers for Sewage Filter Beds. The American City, vol. 74, No. 7, pp. 115–116.

Myklebust, R. J. and F. C. Harmston

1962. Mosquito Production in Stabilization Ponds. Journal of the Water Pollution Control Federation, vol. 34, No. 3, pp. 302–306.

Rawn, A. M.

1949. Eradication of Sludge Flies. Water and Sewage Works, vol. 96, No. 7, pp. 260–261.

SCHAETZLE, T. C.
1952. Control of (Psychoda) Flies at Akron. Sewage and Industrial Wastes, vol. 24, No. 2, pp. 124–134.

SCOTT, H. G.
1961. Filter Fly Control at Sewage Plants. The Sanitarian, vol. 24, No. 1, pp. 14–17.

SCOVILL, R. P.
1963. Mosquito Control in an Industrial Waste Lagoon. Journal of the Water Pollution Control Federation, vol. 35, No. 5, pp. 663–668.

SPIESS, R.
1952. Control of Filter Flies by Chemical Treatment. Water and Sewage Works, vol. 99, No. 6, pp. 250–253.

TOMLINSON, T. G.
1943. Biological Control of the Fly Population in Sewage Filters. Nature, vol. 152, pp. 1–52.

TOMLINSON, T. G.
1945. Control by DDT of Flies Breeding in Percolating Sewage Filters. Nature, vol. 156, No. 3964, pp. 478–479.

TOMLINSON, T. G. and S. H. JENKINS
1947. Control of Flies Breeding in Percolating Sewage Filters. Journal and Proceedings of the Institute of Sewage Purification (London), Pt. 2, p. 94.

TOMLINSON, T. G., J. GRINDLEY, et al.
1949. Control of Flies Breeding in Percolating Sewage Filters. Journal and Proceedings of the Institute of Sewage Purification (London), Pt. 2, p. 127.

VAN KLEECK, B.
1940. The Chironomid Fly. Municipal Sanitation, vol. 11, No. 6, pp. 285–287.

VON ZUBEN, F. J., L. J. OGDEN and R. E. PEEL
1952. House Fly Breeding at Sewage Plants in Texas. Sewage and Industrial Wastes, vol. 24, No. 10, pp. 1303–1305.

WEST, L. E.
1947. The ABC's of DDT. Sewage Works Journal, vol. 19, No. 1, pp. 76–81.

WRAY, F. C.
1959. Mosquito Control in Sludge Lagoons. Mosquito News, vol. 19, No. 6, pp. 81–83.

WATER TREATMENT

GENERAL REFERENCES

BAHLMAN, C.
1931. Larval Contamination of a Clear Water Reservoir. Ohio Conference on Water Purification, State Department of Health, Columbus, Ohio, pp. 56–58.

BAHLMAN, C.
1932. Larval Contamination of a Clear Water Reservoir. Journal of the American Water Works Association, vol. 24, No. 5, pp. 660–664.

BAKER, M. N.
1949. The Quest for Pure Water. American Water Works Association, New York City, New York (Chapter 17), pp. 391–414.

BAYLIS, J. R.
1922. Microorganisms in the Baltimore Water Supply. Journal of the American Water Works Association, vol. 9, No. 5, pp. 712–730.

BAYLIS, J. R. and J. C. VAUGHN
1953. Pollution Loads and Their Effect on Plant Operation. Taste and Odor Control Journal, vol. 19, No. 8, pp. 1–8.

BERRY, A. E.
1932. Vegetable Growths in Water Supplies. Journal of the American Water Works Association, vol. 24, No. 1, pp. 97–104.

BOYD, W. L.
1959. Limnology of Selected Arctic Lakes in Relation to Water Supply Problems. Ecology, vol. 40, No. 1, pp. 49–54.

CHAMBERLAIN, W. J.
1948. Effects of Algae on Water Supply. Paper from Department of Chemistry, University Queensland, Australia, vol. 1, No. 29, pp. 1–104.

CHANG, S. L. and P. W. KABLER
1956. Detection of Cysts of *Endamoeba histolytica* in Tap Water by the Use of Membrane Filter. American Journal of Hygiene, vol. 64, No. 9, pp. 170–180.

CHANG, S. L., J. H. AUSTIN, H. W. POSTON and R. L. WOODWARD

1959. Occurrence of a Nematode Worm in a City Water Supply. Journal of the American Water Works Association, vol. 51, No. 5, pp. 671–676.

CHANG, S. L., R. L. WOODWARD and P. W. KABLER

1960. Survey of Free-Living Nematodes and Amebas in Municipal Supplies. Journal of the American Water Works Association, vol. 52, No. 5, pp. 613–618.

CHANG, S. L.

1960. Proposed Method for Examination of Water for Free-Living Nematodes. Journal of the American Water Works Association, vol. 52, No. 6, pp. 695–698.

CHANG, S. L., G. BERG, N. A. CLARKE and P. W. KABLER

1960. Survival, and Protection Against Chlorination, of Human Enteric Pathogens in Free-Living Nematodes Isolated from Water Supplies. American Journal of Tropical Medicine and Hygiene, vol. 9, No. 2, pp. 136–142.

CHANG, S. L.

1961. Viruses, Amebas, and Nematodes and Public Water Supplies. Journal of the American Water Works Association, vol. 53, No. 3, pp. 288–296.

COOKE, W. B., W. M. INGRAM, A. F. BARTSCH and J. D. ENRIGHT

1957. Submerged Aquatic Plants in a Primary Settling Reservoir. Journal of the American Water Works Association, vol. 49, No. 3, pp. 318–321.

COX, C. R.

1946. Laboratory Control of Water Purification. Case-Shepperd-Mann Publishing Company, New York, pp. 34–74.

FAUST, S. D. and O. M. ALY

1964. Water Pollution by Organic Pesticides. Journal of the American Water Works Association, vol. 56, No. 3, pp. 267–279.

FLENTJE, M. E.

1945. Control and Elimination of Pest Infestations in Public Water Supplies. Journal of the American Water Works Association, vol. 37, No. 11, pp. 1194–1203.

GAINEY, P. L. and T. H. LORD

1950. An Introduction to the Microbiology of Water and Sewage for Engineering Students. Burgess Publishing Company, Minneapolis, Minnesota, 319 pp.

GAINEY, P. L. and T. H. LORD

1952. Microbiology of Water and Sewage. Prentice Hall Incorporated, New York, 430 pp.

HASTINGS, A. B.

1948. Biology of Water Supply. British Museum (Natural History), Economic Series No. 7a, London, England, pp. 1–49.

HENDERSON, C. and Q. H. PICKERING

1963. Use of Fish in the Detection of Contaminants in Water Supplies. Journal of the American Water Works Association, vol. 55, pp. 715–720.

HOBBS, A. T. (ed.)

1950. Manual of British Water Supply Practice. Compiled by The Institute of Water Engineers, W. Heffer and Sons, Ltd., Cambridge, England, pp. 612–654.

INGRAM, W. M.

1959. Asiatic Clams as Potential Pests in California Water Supplies. Journal of the American Water Works Association, vol. 51, No. 3, pp. 363–370.

INGRAM, W. M. and A. F. BARTSCH

1960. Animals Associated with Potable Water Supplies. Journal of the American Water Works Association, vol. 52, No. 12, pp. 1521–1550.

INGRAM, W. M. and A. F. BARTSCH

1960. Operator's Identification Guide to Animals Associated with Potable Water Supplies. Journal of the American Water Works Association, vol. 52, No. 12, pp. 1521–1550.

KIRKPATRICK, R.

1924. The Biology of Waterworks, 3rd ed. British Museum (Natural History), Economic Series No. 7, London, England, pp. 1–58.

LUND, J. W. G.

1954. The Importance of Algae to Waterworks Engineers. Journal of the Institute of Water Engineers, vol. 8, No. 6, pp. 496–504.

Lund, J. W. G.
1955. The Ecology of Algae and Waterworks Practice. Proceedings of the Society for Water Treatment and Examination, vol. 4, Pt. 2, pp. 83–109.

Matheson, D. H.
1952. The Effects of Algae in Water Supplies. International Water Supply Association, Second Congress, Paris, France, pp. 1–82.

Meier, F. E.
1939. Plankton in the Water Supply. Publication 3574, Smithsonian Report for 1939, pp. 393-412.

Myers, H. C.
1947. Role of Algae in Corrosion. Journal of the American Water Works Association, vol. 39, No. 4, pp. 322–324.

Palmer, C. M. and H. W. Poston
1956. Algae and Other Interference Organisms in Indiana Water Supplies. Journal of the American Water Works Association, vol. 48, No. 10, pp. 1335–1346.

Palmer, C. M.
1958. Algae and Other Interference Organisms in New England Supplies. Journal of the New England Water Works Association, vol. 72, No. 1, pp. 27–46.

Palmer, C. M. and C. M. Tarzwell
1955. Algae of Importance in Water Supplies. Public Works Magazine, vol. 88, No. 6, pp. 107–120.

Palmer, C. M. and C. M. Tarzwell
1960. Algae and Other Interference Organisms in the Waters of the South Central United States. Journal of the American Water Works Association, vol. 52, No. 7, pp. 897–914.

Palmer, C. M. and C. M. Tarzwell
1961. Algae and Other Interference Organisms in Water Supplies of California. Journal of the American Water Works Association, vol. 53, No. 10, pp. 1297–1312.

Palmer, C. M.
1964. Algae in Water Supplies of the United States. In: Jackson, D. F. (ed.), Algae and Man, Plenum Press, New York, pp. 239–261.

Penn, J. F. (ed.)
1963. Quality Aspects of Water Distribution Systems, Proceedings of the Society for Water Treatment and Examination, vol. 4, Pt. 2, pp. 83–109.

Persall, W. H., A. C. Gardiner and F. Greenshields
1946. Freshwater Biology and Water Supply in Britain. Fresh-Water Biological Association of the British Empire. Publication No. 11, pp. 1–90 (Wray Castle, Ambleside, Westmoreland, England).

Purdy, W. C.
1931. Interpretation and Use of Biological Data in the Water Works Field. Proceedings of the 9th Annual Water Works School, Kansas, pp. 31–35.

Purdy, W. C.
1935. Result of Algal Activity Some Familiar; Others Obscure. Journal of the American Water Works Association, vol. 27, No. 9, pp. 1120–1133.

Sawyer, C. N.
1965. Problem of Phosphorus in Water Supplies. Journal of the American Water Works Association, vol. 57, No. 11, pp. 1431–1439.

Sinclair, R. M.
1964. Clam Pests in Tennessee Water Supplies. Journal of the American Water Works Association, vol. 56, No. 5, pp. 592–599.

Skulberg, O.
1964. Algal Problems Related to the Eutrophication of European Water Supplies, and a Bio-Assay Method to Assess Fertilizing Influences of Pollution on Inland Waters: In: Jackson, D. F. (ed.), Algae and Man, Plenum Press, New York, pp. 262–299.

Tarzwell, C. M. and C. M. Palmer
1951. Ecology of Significant Organisms in Surface Water Supplies. Journal of the American Water Works Association, vol. 43, No. 7, pp. 568–578.

Taylor, E. W.
1949. The Examination of Waters and Water Supplies. (Thresh, Beale, and Suckling). J. and A. Churchill, London, pp. 1–819.

Walton, L. B.
1930. Studies Concerning Organisms Occurring in Water Supplies with Particular Reference to Those Found in Ohio. Ohio State University Press, vol. 5, No. 1, pp. 1–86.

Whipple, G. C., G. M. Fair and M. C. Whipple
1948. The Microscopy of Drinking Water. John Wiley and Sons, New York, 586 pp.

Wilson, C.
1932. Biological Control as Affecting Plant Operation. Journal of the American Water Works Association, vol. 24, No. 11, pp. 1792–1799.

CONTROL OF AQUATIC ORGANISMS

Anderson, E.
1952. Application of Activated Carbon to the Tyrone, Pa., Reservoir. Taste and Odor Control Journal, vol. 18, No. 6, pp. 1–4.

Angell, H. H.
1953. Ronte Reservoir Algae. The American City, vol. 68, No. 10, pp. 90–91.

Arnold, G. E.
1936. Plankton and Insect Larvae Control in California Waters. Journal of the American Water Works Association, vol. 28, No. 10, pp. 1469–1479.

Bailey, H. E. and J. Steadley
1947. Activated Carbon Treatment of an Open Reservoir. Water and Sewage Works, vol. 94, pp. 219–222.

Baker, M. N.
1949. The Quest for Pure Water. American Water Works Association, New York (Chapter 17), pp. 391–414.

Berry, A. E.
1961. Removal of Algae by Microstrainers. Journal of the American Water Works Association, vol. 53, No. 12, pp. 1503–1508.

Caird, J. E.
1945. Algae Growth Greatly Reduced After Stocking Pond with Fish. Water Works Engineering, vol. 98, No. 5, p. 240.

Campbell, S. J. and W. C. Ringer
1955. Use of Chlorine Dioxide for Algae Control in Philadelphia. Journal of the American Water Works Association, vol. 47, No. 8, pp. 740–746.

Cox, C. R.
1946. Laboratory Control of Water Purification. Case-Shepperd-Mann Publishing Company. New York, 386 pp.

Cox, C. R.
1952. Water Supply Control. Bulletin 22, Bureau of Environmental Sanitation. New York State Department of Health (Chapter 5. Taste and Odor Control), pp. 135–158.

Derby, R. L. and D. W. Graham
1953. Control of Aquatic Growths in Reservoirs by Copper Sulfate and Secondary Effects of Such Treatment. Proceedings of the American Society of Civil Engineers, vol. 79, Separate No. 203, pp. 1–15.

Derby, R. L. and F. W. Townsend
1953. Reservoir Treatment by Improved Methods. Water and Sewage Works, vol. 100, No. 6, pp. 211–216.

Derby, R. L.
1954. Methods of Controlling Aquatic Growths in Reservoirs. Journal of the American Water Works Association, vol. 46, No. 11, pp. 1150–1158.

Flentje, M. E.
1952. Control of Algae and Weeds in Reservoirs. Journal of the American Water Works Association, vol. 44, No. 8, pp. 727–731.

Ford, M. E., Jr.
1963. Air Injection for Control of Reservoir Limnology. Journal of the American Water Works Association, vol. 55, No. 3, pp. 267–274.

Funk, W. H. and A. R. Gaufin
1965. Control of Taste- and Odor-Producing Algae in Deer Creek Reservoir. Transactions of the American Microscopical Society, vol. 84, No. 2, pp. 263–269.

Gallaher, W. W.
1940. Control of Algae at Appleton, Wisconsin. Journal of the American Water Works Association, vol. 32, No. 7, pp. 1165–1175.

Gibbons, M. M.
1940. The Use of Benoclor-3 in Potable Water Supplies. Water Works and Sewerage, vol. 87, No. 5, pp. 231–236.

Goudey, R. F.
1936. A New Method of Copper Sulfating Reservoirs. Journal of the American Water Works Association, vol. 28, No. 2, pp. 163–179.

Goudey, R. F.
1938. Sunshine and Algae Control. Engineering News-Record, vol. 120, No. 16, pp. 581–582.

Goudey, R. F.
1944. Algicides. Water Works Engineering, vol. 97, No. 25, pp. 1461–1462.

Hale, F. E.
1923. Taste and Odor Control in New York City's Supplies. Journal of the American Water Works Association, vol. 10, No. 5, pp. 829–837.

Hale, F. E.
1930. Controlling Microscopic Organisms in Public Water Supplies. Water Works Engineering, vol. 83, No. 6, pp. 353–354; 379–384.

Hartung, H. O. and V. C. Lischer
1942. Carbon Blackout as a Means of Preventing Algae Growth. Taste and Odor Control Journal, vol. 8, No. 8, pp. 1–3.

Hilsenhoff, W. L.
1959. The Evaluation of Insecticides for the Control of *Tendipes plumosus* (Linnaeus). Journal of Economic Entomology, vol. 52, No. 2, pp. 331–332.

Johnson, E. E.
1931. An Attempt to Control Cyclops in a Water Plant. Journal of the American Water Works Association, vol. 23, No. 4, pp. 582–585.

Mangun, L. B.
1929. Algae Control by Chlorination at Kansas City, Kansas. Journal of the American Water Works Association, vol. 21, No. 1, pp. 44–49.

Marx, A. J.
1951. Pre-Treatment Basin for Algae Removal. Taste and Odor Control Journal, vol. 17, No. 6, pp. 1–8.

Mascia, V.
1960. Chemical Methods of Weed Control in Reservoirs. Journal of the New England Water Works Association, vol. 74, No. 3, pp. 185–188.

Matheson, D. H.
1952. The Effects of Algae in Water Supplies. General Report Prepared for the 1952 Congress for the International Water Supply Association, Paris, pp. 1–82.

Matheson, D. H.
1953. Algae Control in Small Water Plants. Journal of the American Water Works Association, vol. 45, No. 11, pp. 1238–1244.

Nason, H. K.
1938. Chemical Methods in Slime and Algae Control. Journal of the American Water Works Association, vol. 30, No. 3, pp. 437–452.

Nesin, B. C.
1954. Methods of Controlling Aquatic Growths in Reservoirs—Joint Discussion. Journal of the American Water Works Association, vol. 46, No. 11, pp. 1141–1150.

Norcom, G. D. and K. W. Brown
1942. Water Purification for Plant Operators. McGraw-Hill Book Company, New York (Chapter 12), pp. 130–144.

Opie, V.
1940. Blackout of Algae with Activated Carbon. Taste and Odor Control Journal, vol. 6, No. 11, pp. 1–2.

Palmer, C. M.
1956. Evaluation of New Algicides for Water Supply Purposes. Journal of the American Water Works Association, vol. 48, No. 9, pp. 1133–1137; Same paper: Taste and Odor Control Journal, vol. 23, No. 1, pp. 1–4.

Ringer, W. C. and S. J. Campbell
1955. Use of Chlorine Dioxide for Algae Control at Philadelphia. Journal of the American Water Works Association, vol. 47, No. 8, pp. 740–746.

Scriven, J.
1960. Microstraining Removes Algae and Cuts Filter Backwashing. Water Works Engineering, vol. 113, No. 6, pp. 554–555.

Shane, M. S.
1948. Effect of DDT Spray on Reservoir Biological Balance. Journal of the American Water Works Association, vol. 40, No. 3, pp. 333–336.

Shane, M. S.
1963. How to Black Out Algae. Water Works Engineering, vol. 116, No. 7, pp. 552–553.

Silvey, J. K. G. and R. C. Hoern
1964. Bacterial Degradation of Taste and Odor Compounds. Southwest Water Works Journal, vol. 46, pp. 68–70.

Snow, E. A., Jr.
1958. The Most Troublesome Algae in New England Waters. Journal of the New England Water Works Association, vol. 72. No. 9, pp. 328–331.

Sopp, C. W.
1936. Plankton Control in Morris Reservoir. Journal of the American Water Works Association, vol. 28, No. 4, pp. 447–457.

Surber, E. W.
1950. Control of Aquatic Growths in Impounding Reservoirs. Journal of The American Water Works Association, vol. 42, No. 8, pp. 735–740.

Taft, C. E.
1945. The Algologist and Water Sanitation. Ohio Journal of the Academy of Science, vol. 45, No. 3, pp. 97–102.

Taft, C. E.
1949. The Algologist's Part in City and Industrial Water Supply Problems. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 74–78.

Wilbur, C. C.
1961. Microstrainers to Remove Insect Larvae. Public Works, vol. 92, No. 6, pp. 118–119.

Wilcomb, G. E.
1935. *Synura* Troubles at Albany, New York. Journal of the American Water Works Association, vol. 27, No. 6, pp. 742–748.

Wolfson, L. L. and R. J. Michalski
1964. The Incidence and Effects of the Anaerobic Bacteria, *Clostridium*, in Paper Mill Systems. Technical Association of the Pulp and Paper Industry, vol. 47, pp. 197–199.

TASTE AND ODOR ALGAE

Allen, E. J.
1960. Taste and Odor Problems in New Reservoirs in Wooded Areas. Journal of the American Water Works Association, vol. 52, No. 8, pp. 1027–1032.

Bailey, W. T.
1935. Taste and Odor Control at Council Bluffs. Journal of the American Water Works Association, vol. 27, No. 4, pp. 458–471.

Baker, R. A.
1961. Problems of Tastes and Odors. Journal of the Water Pollution Control Federation, vol. 33, No. 10, pp. 1099–1106.

Baylis, J. R.
1935. Elimination of Taste and Odor in Water. McGraw-Hill Book Company, New York, 392 pp.

Campbell, R. W.
1951. Microscopic Examination of Water at Lorain, Ohio. Taste and Odor Control Journal, vol. 17, No. 1, pp. 1–4.

Cohen, J. M.
1963. Taste and Odor of ABS in Water. Journal of the American Water Works Association, vol. 55, No. 5, pp. 587–591.

Cole, B. G.
1948. Taste and Odor Control at Shreveport. Journal of the American Water Works Association, vol. 40, No. 5. pp. 593–546.

Gaufin, A. R.
1964. Taste and Odor Production in Reservoirs by Blue-Green Algae. Journal of the American Water Works Association, vol. 56, No. 10, pp. 1345–1350.

Harlock, C. R. and M. R. Dowlin
1953. Chlorine and Chlorine Dioxide for Control of Algae Odors. Water and Sewage Works, vol. 100, No. 1, pp. 74–75.

Hassler, W. W.
1941. The History of Taste and Odor Control. Journal of the American

Water Works Association, vol. 33, No. 12, pp. 2124–2152.

HOWARD, N. J.
1949. Taste and Odor Treatment. Water Works Engineering, vol. 93. No. 8, pp. 420–423, 491.

LENDALL, H. N.
1946. A Comprehensive Survey of the Taste and Odor Problem. Taste and Odor Control Journal, vol. 12, No. 10, pp. 1–8.

MALONEY, T. E.
1963. Research on Algal Odor. Journal of the American Water Works Association, vol. 55, No. 5, pp. 481–486.

MATHESON, D. H.
1954. Taste and Odor Control in Small Water Plants. Water and Sewage Works, Pt. II, vol. 107, pp. 137–140.

MIDDLETON, F. M.
1960. Taste and Odor Sources and Methods of Measurement. Taste and Odor Control Journal, vol. 26, No. 3. pp. 1–4.

MOSES, H. E.
1933. Taste and Odor Control on Pennsylvania Water Supplies. Journal of the American Water Works Association, vol. 25, No. 8, pp. 1066-1080.

O'BRIEN, G. L.
1943. Taste and Odor Control by Reservoir Chlorine Blanket. Water Works Engineering, vol. 96, No. 18, pp. 996–999.

RAAB, F.
1931. Taste and Odor Troubles in the Minneapolis Water Supply. Journal of the American Water Works Association, vol. 23, No. 3, pp. 430–434.

ROMANO, A. H. and R. S. SAFFERMAN
1963. Studies on Actinomycetes and their Odors. Journal of the American Water Works Association, vol. 55, No. 2, pp. 169–176.

RYCKMAN, D. W. and S. G. GRIGOROPOULOS
1959. Use of Chlorine and Its Derivatives in Taste and Odor Removal. Journal of the American Water Works Association, vol. 51, No. 10, pp. 1268–1274.

SIGWORTH, E. A.
1957. Control of Odor and Taste in Water Supplies. Journal of the American Water Works Association, vol. 49, No. 12, pp. 1507–1521.

SIGWORTH, E. A.
1960. Taste and Odor Control in the United States, with Specific Reference to the Southwest Area. Southwest Water Works Journal, vol. 41, No. 3, pp. 20–24.

SILVEY, J. K. G.
1964. Studies on Microbiotic Cycles in Surface Waters. Journal of the American Water Works Association, vol. 56, No. 1, pp. 60–72.

STAFF REPORT
1963. The Threshold Odor Test. Part I. Taste and Odor Control Journal, vol. 29, No. 6. pp. 1–8.

STAFF REPORT
1963. The Threshold Odor Test. Part II. Taste and Odor Control Journal, vol. 29, No. 7, pp. 1–4.

STAFF REPORT
1963. The Threshold Odor Test. Part III. Taste and Odor Control Journal, vol. 29, No. 8, pp. 1–4.

THOMAS, N. A.
1940. Taste and Odor Control on Lake Michigan. Journal of the American Water Works Association, vol. 32, No. 7, pp. 1183–1186.

TURRE, G. J.
1953. Algae Responsible for Odor and Taste in Public Water Supplies. Proceedings of the American Society of Civil Engineers, vol. 79, Separate No. 267, pp. 1–20.

BIOLOGICAL ASPECTS OF IMPOUNDING RESERVOIRS

BALL, O. P.
1957. Management of Sport Fishing in San Diego's Program of Multiple Use of Water Supply Reservoirs. Transactions of the American Fisheries Society, vol. [illegible]. No. 2, pp. 200–206.

BONN, E. W. and L. R. HOLBERT
1961. Some Effects of Rotenone Products on Municipal Water Supplies. Transactions of the American Fisheries Society, vol. 90, No. 3, pp. 287–297.

BROWN, K. W.

1933. Experiences with Well Water in an Uncovered Reservoir. Journal of the American Water Works Association, vol. 35, No. 3, pp. 337–342.

BURNSON, B.

1938. Seasonal Temperature Variations in Relation to Water Treatment. Journal of the American Water Works Association, vol. 30, No. 5, pp. 793–811.

CHURCHILL, M. A.

1965. Effects of Density Currents in Reservoirs on Water Quality. Water and Sewage Works, vol. 112, No. 11, pp. R135–140, 142.

CLOUGH, J.

1962. Dredging at Hurworth Burn Reservoir, Hartlepools Water Company. Journal of the Institute of Water Engineers, vol. 16, No. 1, pp. 46–48.

COHEN, J. M., L. J. KAMPHAKE, A. E. LEMKE, C. HENDERSON and R. L. WOODWARD

1960. Effect of Fish Poisons on Water Supplies. Part I. Removal of Toxic Materials. Journal of the American Water Works Association, vol. 52, No. 12, pp. 1151–1166.

COHEN, J. M., G. A. ROURKE and R. L. WOODWARD

1961. Effect of Fish Poisons on Water Supplies. Part 2. Odor Problems. Journal of the American Water Works Association, vol. 53, No. 1, pp. 49–62.

COHEN, J. M., Q. H. PICKERING, R. L. WOODWARD and W. VAN HEUVELEN

1961. Effect of Fish Poisons on Water Supplies. Part 3. Field Study at Dickinson. Journal of the American Water Works Association, vol. 53, No. 2, pp. 233–246.

COHEN, J. M.

1962. Removal of Fish Poisons from a Water Supply. Taste and Odor Control Journal, vol. 28, No. 4, pp. 1-4.

COOKE, W. B., W. M. INGRAM, A. F. BARTSCH and J. D. ENRIGHT

1957. Submerged Aquatic Plants in a Primary Settling Reservoir. Journal of the American Water Works Association, vol. 49, No. 3, pp. 318–321.

COPELAND, O. L.

1961. Watershed Management and Reservoir Life. Journal of the American Water Works Association, vol. 53, No. 5, pp. 569–578.

COUTANT, C. C.

1964. Stream Plankton Above and Below Green Lake Reservoir. Proceedings of the Pennsylvania Academy of Sciences, vol. 37, pp. 122–126.

DENDY, J. S. and R. H. STROUD

1949. The Dominating Influence of Fontana Reservoir on Temperature and Dissolved Oxygen in the Little Tennessee River and Its Impoundments. Journal of the Tennessee Academy of Sciences, vol. 24, No. 1, pp. 41–51.

GARDINER, A. C.

1939. Some Aspects of Water Works Biology. Annals of Applied Biology, vol. 26, No. 1, pp. 175–177.

HAMMERTON, D.

1959. A Biological and Chemical Study of Chew Valley Lake. Proceedings of the Society of Water Treatment and Examination, vol. 8, Pt. 2, pp. 87–117.

HOLTJE, R. H.

1939. Some Trouble-Makers in Reservoirs. Journal of the American Water Works Association, vol. 31, No. 3, pp. 550–557.

HOUGHTON, G. V.

1955. Biological and Chemical Problems in a Shallow Reservoir. Water and Sewage Works, vol. 102, No. 1, pp. 19–21.

HURST, W. D.

1945. Predaceous Diving Beetles in Winnipeg's Water Supply. Journal of the American Water Works Association, vol. 37, No. 11, pp. 1204–1206.

KOFOID, C. A.

1923. Microorganisms in Reservoirs and Their Relations to Esthetic Qualities. Journal of the American Water Works Association, vol. 10, No. 2, pp. 183–191.

KURAN, O. G.

1953. Ront Reservoir Algae. The American City, vol. 68, No. 10, pp. 90–91.

MEDBERY, H. C.

1942. Limnological Observations on San

Francisco Reservoirs. Journal of the American Water Works Association, vol. 34, No. 5, pp. 719–735.

NEEL, J. K.
1963. Impact of Reservoirs. Chapter 20. In: Frey, D. G. (ed.), Limnology in North America. University of Wisconsin Press, Madison, pp. 575–594.

SHANER, H. L.
1925. The Impounding Reservoir, Its Troubles and Remedies. Journal of the American Water Works Association, vol. 13, No. 5, pp. 531–543.

STOBER, Q.
1962. Some Limnological Effects of Tiber Reservoir on the Marias River, Montana. Proceedings of the Montana Academy of Sciences, vol. 23, pp. 111–137.

SYLVESTER, R. O.
1958. Water Quality Studies in the Columbia River Basin. U. S. Fish and Wildlife Service, Special Scientific Report, Fisheries No. 239, pp. 1–134.

SYMONS, J. R., S. R. WEIBEL and G. G. ROBECK
1964. Influence of Impoundments on Water Quality. A Review of Literature and Statement of Research Needs. U. S. Public Health Service Publication No. 999–WP–18, pp. 1–78.

TARZWELL, C. M. and C. M. PALMER
1951. Ecology of Significant Organisms in Surface Water Supplies. Journal of the American Water Works Association, vol. 43, No. 7, pp. 568–578.

THOMPSON, R. W. S.
1954. Stratification and Overturn in Lakes and Reservoirs. Journal of the Institute of Water Engineers, vol. 8, No. 1, pp. 19–52.

WEISS, C. M. and R. T. OGLESBY
1962. Limnology of a North Carolina Reservoir and Its Use in Water Treatment. Journal of the American Water Works Association, vol. 54, No. 6. pp. 671–683.

WESTON, R. S.
1925. Period of Storage and Microorganisms in Reservoirs. Journal of the Northeastern Water Works Association, vol. 39, p. 225.

WHIPPLE, G. C.
1922. A Long Record of Microscopical Examinations. Journal of the American Water Works Association, vol. 9, No. 3, pp. 436–441.

WILSON, C.
1927. The Biological Control of Impounding Reservoirs. Journal of the American Water Works Association, vol. 17, No. 2, pp. 247–252.

CLOGGING ORGANISMS

ANON.
1924. Clogging of Intakes by Fish. Journal of the American Water Works Association, vol. 11, No. 1, pp. 219–221.

BAYLIS, J. R.
1922. Microorganisms in Baltimore Water Supply. Journal of the American Water Works Association, vol. 9, No. 5, pp. 712–730.

BAYLIS, J. R. and H. H. GERSTEIN
1929. Microorganisms in the Lake Michigan Water at Chicago, Their Effect on Filtration and Method for Counting. Municipal News and Water Works, vol. 76, No. 7, pp. 291–296.

BAYLIS, J. R.
1955. Effect of Microorganisms in Lengths of Filter Runs. Water Works Engineering, vol. 108, No. 2, pp. 127–128, 158.

BERARD, W. W. and J. R. BAYLIS
1946. Screen Clogging by a Rare Species of Algae. Water and Sewage Works, vol. 93, No. 6, pp. 223–224.

BERRY, A. E.
1932. Vegetable Growths in Water Supplies. Journal of the American Water Works Association, vol. 24, No. 1, pp. 97–104.

BROOK, A. J.
1954. The Bottom-Living Algal Flora of Slow Sand Filter Beds of Waterworks with Special Reference to the Establishment of Species in the Beds. Hydrobiologia, vol. 6, Nos. 3 and 4, pp. 333–351.

CLARKE, K. B.
1961. Treatment Difficulties Due to a Massive Crop of *Ceratium hirundinella*. Journal of the Institute of Water Engineers, vol. 15, No. 3, pp. 233–238.

HUDGINS, B.
1931. Turbidity, Plankton and Mineral Content of the Detroit (Michigan) Water Supply. Journal of the American Water Works Association, vol. 23, No. 3, pp. 435–444.

PALMER, C. M. and H. W. POSTON
1956. Algae and Other Interference Organisms in Indiana Water Supplies. Journal of the American Water Works Association, vol. 48, No. 10, pp. 1335–1346.

POSTON, H. W. and M. B. GAMET
1964. Effect of Algae on Filter Runs with Great Lakes Water. Journal of the American Water Works Association, vol. 56, No. 9, pp. 1203–1216.

ROSENTHAL, H.
1921. Overcoming Difficulties with Crustacea in Filter Beds. Journal of the American Water Works Association, vol. 8, No. 5, pp. 530–531.

SHANER, E. P.
1925. The Impounding Reservoir, Its Troubles and Remedies. Journal of the American Water Works Association, vol. 13, No. 5, pp. 531–543.

SINCLAIR, R. M. and B. G. ISOM
1963. Further Studies on the Introduced Asiatic Clam *(Corbicula)* in Tennessee. Tennessee Stream Pollution Control Board, Tennessee Department of Public Health, pp. 1–82.

SINCLAIR, R. M.
1964. Clam Pests in Tennessee Water Supplies. Journal of the American Water Works Association, vol. 56, No. 5, pp. 592–599.

CLEAR WELL ORGANISMS

BAHLMAN, C.
1932. Larval Contamination of a Clear Water Reservoir. Journal of the American Water Works Association, vol. 24, No. 5, pp. 660–664.

COLLINS, J. S.
1958. Some Experiences with Nais and Nematodes in the Public Water Supply of Norwich. Proceedings of the Society for Water Treatment and Examination (London), vol. 7, Pt. 2, pp. 157–172.

FLENTJE, M. E.
1945. Control and Elimination of Pest Infestations in Public Water Supplies. Journal of the American Water Works Association, vol. 37, No. 11, pp. 1194–1203.

FLENTJE, M. E.
1945. Elimination of Midge Fly Larvae with DDT. Journal of the American Water Works Association, vol. 37, No. 11, p. 1053.

HECHMER, C. A.
1932. Chironomus in Water Supply. Journal of the American Water Works Association, vol. 24, No. 5, pp. 665–668.

PIPE AND DISTRIBUTION SYSTEM ASSOCIATED ORGANISMS

BAYLIS, J. R.
1957. Microorganisms that Have Caused Trouble in the Chicago Water System. Pure Water, vol. 9, p. 47.

BUSWELL, A. M.
1938. Microscopic Growths in Distribution Systems and Their Food Supply. Journal of the American Water Works Association, vol. 30, No. 10, pp. 1651–1654.

CHANG, S. L., J. H. AUSTIN, H. W. POSTON and R. L. WOODWARD
1959. Occurrence of a Nematode Worm in a City Water Supply. Journal of the American Water Works Association, vol. 51, No. 5, pp. 671–676.

CLARKE, K. B.
1952. The Infestation of Waterworks by *Dreissenia polymorpha*, a Fresh Water Mussel. Journal of the Institute of Water Engineers, vol. 6, No. 5, pp. 370–379.

CLARK, F. M.
1963. Iron Bacteria. In: Quality Aspects of Water Distribution Systems. University of Illinois Engineering Station Circular No. 81, pp. 85–89.

CRABILL, M. P.
1956. Biologic Infestation at Indianapolis. Journal of the American Water Association, vol. 48, No. 3, pp. 269–274.

CRABILL, M. P.
1963. Biologic Infestations in Water Distribution Systems. In: Quality Aspects of Water Distribution Systems. University of Illinois Engineering Experiment Station, Circular No. 81, pp. 90–93.

DERBY, R. L.
1947. Control of Slime Growths in Transmission Lines. Journal of the American Water Works Association, vol. 39, No. 11, pp. 1107–1114.

ENGLISH, E.
1958. Biological Problems in Distribution Systems—Infestations of Water Mains. Proceedings of the Society for Water Treatment and Examination, vol. 7, No. 2, pp. 127–143.

FLENTJE, M. E.
1945. Control and Elimination of Pest Infestations in Public Water Supplies. Journal of the American Water Works Association, vol. 37, No. 11, pp. 1194–1203.

HURST, W. D.
1945. Predaceous Diving Beetles in Winnipeg's Water Supply. Journal of the American Water Works Association, vol. 37, No. 11, pp. 1204–1206.

INGRAM, W. M.
1956. Snail and Clam Infestations of Drinking-Water Supplies. Journal of the American Water Works Association, vol. 48, No. 3, pp. 258–268.

INGRAM, W. M. and K. M. MACKENTHUN
1963. Animal Infestations in Distribution Systems. In: Quality Aspects of Water Distribution Systems. University of Illinois Engineering Experiment Station, Circular No. 81, pp. 79–84.

KELLY, S. N.
1955. Infestation of the Norwich, England, Water System. Journal of the American Water Works Association, vol. 47, No. 4, pp. 330–334.

LUESCHOW, L. A. and K. M. MACKENTHUN
1962. Detection and Enumeration of Iron Bacteria in Municipal Water Supplies. Journal of the American Water Works Association, vol. 52, No. 6, pp. 751–756.

OLIVER, G. C. S.
1961. The Eradication of *Asellus* from Water Mains by Application of Pyrethrum. Journal of the Institute of Water Engineers, vol. 15, No. 2, pp. 51–52.

SILVEY, J. K. G.
1956. Bloodworms in Distribution Systems. Journal of the American Water Works Association, vol. 48, No. 3, pp. 275–280.

SILVEY, J. K. G.
1963. Actinomycetes in Water Distribution Systems. In: Quality Aspects of Water Distribution Systems. University of Illinois Engineering Station, Circular No. 81, pp. 62–71.

CHLORINE AND ITS EFFECT ON ORGANISMS

ALLEN, L. A., N. BLEZARD and A. B. WHEATLAND
1946. Toxicity to Fish of Chlorinated Sewage Effluents. Surveyor, vol. 105, p. 298.

COVENTRY, F. L., V. E. SHELFORD and L. F. MILLER
1935. The Conditioning of a Chloramine Treated Water Supply for Biological Purposes. Ecology, vol. 16, No. 1, pp. 60–66.

DOUDOROFF, P. and M. KATZ
1950. Critical Review of Literature on the Toxicity of Industrial Wastes and Their Components to Fish: I. Alkalies, Acids and Inorganic Gases. Sewage and Industrial Wastes, vol. 22, No. 11, pp. 1432–1458

HALE, F. E.
1950. The Use of Copper Sulphate in Control of Microscopic Organisms. Phelps-Dodge Refining Corporation, New York, pp. 1–44.

MATHESON, D. H.
1952. The Effects of Algae in Water Supplies. International Water Supply Association, 2nd Congress, Paris, France, pp. 1–82.

MERKENS, J. C.
1958. Studies on the Toxicity of Chlorine and Chloramines to the Rainbow

Trout. Water and Waste Treatment Journal, vol. 7, No. 4, pp. 150–151.

Taylor, R. S. and M. C. James
1928. Treatment for Removal of Chlorine from City Water for Use in Aquaria. U. S. Bureau of Fisheries. Document No. 1045. Report of U. S. Commission of Fisheries, 1928, App. 7, pp. 322–327.

Zimmerman, P. W. and R. O. Berg
1934. Effects of Chlorinated Water on Land Plants, Aquatic Plants and Goldfish. Contribution of Boyce Thompson Institute, vol. 6, pp. 39–49.

ACTINOMYCETES

Adams, B. A.
1933. The Role of Actinomycetes in Producing Earthy Tastes and Smells in Potable Water. Report Public Works, Roads, and Transport Congress, Paper No. 14, London.

Safferman, R. S. and M. E. Morris
1962. A Method for the Isolation and Enumeration of Actinomycetes Related to Water Supplies. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W62–10, pp. 1–15.

Silvey, J. K. G., J. C. Russell, D. R. Redden and W. C. McCormick
1950. Actinomycetes and Common Tastes and Odors. Journal of the American Water Works Association, vol. 42, No. 11, pp. 1018–1026.

Silvey, J. K. G.
1953. Newer Concepts of Tastes and Odors in Surface Water Supplies. Water and Sewage Works, vol. 100, No. 11, p. 426.

Silvey, J. K. G.
1953. Relation of Irrigation Runoff to Tastes and Odors. Journal of the American Water Works Association, vol. 45, No. 11, pp. 1179–1186.

Silvey, J. K. G. and A. W. Roach
1953. Actinomycetes in the Oklahoma City Water Supply. Journal of the American Water Works Association, vol. 45, No. 4, pp. 409–416.

Silvey, J. K. G.
1954. Newer Concepts of Tastes and Odors in Surface Water Supplies. Water and Sewage Works, vol. 101, No. 5, pp. 208–211.

Silvey, J. K. G. and A. W. Roach
1956. Actinomycetes May Cause Tastes and Odors in Water Supplies. Public Works Magazine, vol. 87, No. 5, pp. 103–106; 210–212.

Silvey, J. K. G. and A. W. Roach
1959. Laboratory Culture of Taste- and Odor-Producing Aquatic Actinomycetes. Journal of the American Water Works Association, vol. 51, No. 1, pp. 20–32.

Tarzwell, C. M.
1950. Oklahoma City Taste and Odor Study. A Preliminary Study of the Taste and Odor Problems in the Oklahoma City Water Supply. Federal Security Agency, U. S. Public Health Service, Environmental Health Center, Cincinnati, Ohio, pp. 1–37.

RECREATIONAL WATER TREATMENT

GENERAL REFERENCES

Bartsch, A. F.
1954. Practical Methods for Control of Algae and Water Weeds. Public Health Reports, vol. 69, No. 8, pp. 749–757.

Chancellor, A. P.
1958. The Control of Aquatic Weeds and Algae. Ministry of Agriculture, Fisheries and Food, H. M. Stationery Office, London, 20 pp.

Domogalla, B. P.
1926. Treatment of Algae and Weeds in Lakes at Madison. Engineering News-Record, vol. 97, No. 24, pp. 950–954.

Greenwald, M.
1956. List of References on Control of Aquatic Plants, Including Algae. Chipman Chemical Company, Incorporated, Bound Brook, New Jersey, pp. 1–22.

Greenwald, M.
1957. Supplement to the List of References on Control of Aquatic Plants, Including Algae. Chipman Chemical Company, Incorporated, Bound Brook, New Jersey, pp. 1–12.

MACKENTHUN, K. M.
1952. Cleaner Lakes can be a Reality. Wisconsin Conservation Bulletin, vol. 17, No. 1, pp. 1–4.

MACKENTHUN, K. M.
1958. The Chemical Control of Aquatic Nuisances. Wisconsin Committee on Water Pollution, Madison, Wisconsin, 64. pp.

MACKENTHUN, K. M., W. M. INGRAM and R. PORGES
1964. Limnological Aspects of Recreational Lakes. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 1167, pp. 1–176.

SAWYER, C. N.
1962. Causes, Effects, and Control of Aquatic Growths. Journal of the Water Pollution Control Federation, vol. 34, No. 3, pp. 279–290.

SURBER, E. W.
1950. Control of Aquatic Growths in Impounding Reservoirs. Journal of the American Water Works Association, vol. 42, No. 8, pp. 735–740.

ALGAL CONTROL

ANON.
1959. Cladophora Investigations: Observation on the Nature and Control of Excessive Growth of *Caldophora sp.* in Lake Ontario. The Ontario Water Resources Commission, pp. 1–30.

ARNOLD, G. E.
1936. Plankton and Insect Larvae Control in California Waters. Journal of the American Water Works Association, vol. 28, No. 10, pp. 1469–1479.

DOMOGALLA, B. P.
1926. Treatment of Algae and Weeds in Lakes at Madison. Engineering News Record, vol. 97, No. 24, pp. 950–954.

DOMOGALLA, B. P.
1941. Scientific Studies and Chemical Treatment of the Madison Lakes. In: A Symposium on Hydrobiology. University of Wisconsin Press, Madison, Wisconsin, pp. 303–310.

FITZGERALD, G. P., G. C. GERLOFF and F. SKOOG
1952. Studies on Chemicals with Selective Toxicity to Blue-Green Algae. Sewage and Industrial Wastes, vol. 24, No. 7, pp. 888–896.

FITZGERALD, G. P. and F. SKOOG
1954. Control of Blue-Green Algae Blooms with 2,3–Dichloronapthoquinone. Sewage and Industrial Wastes, vol. 26, No. 9, pp. 1136–1140.

FITZGERALD, G. P.
1958. Control of Growth of Algae with CMU [3–(p–chlorophenyl)–1: 1–dimethylurea]. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, 1957, vol. 46, pp. 281–294 (1958). Journal of Applied Chemistry, vol. 8, pp. ii–235–236 (September 1958).

HALE, F. E.
1954. Use of Copper Sulphate in Control of Microscopic Organisms. Phelps Dodge Refining Corporation, New York, pp. 1–30.

HASLER, A. D. and E. JONES
1949. Demonstration of the Antagonistic Action of Large Aquatic Plants on Algae and Rotifers. Ecology, vol. 30, No. 3, pp. 359–364.

JOHNSON, L. D.
1955. Control of *Ulothrix zonata* in Circular Ponds. Progressive Fish Culturist, vol. 17, No. 3, pp. 126–128.

LAWRENCE, J. M.
1954. Control of Branched Alga Pithophora, in Farm Fish Ponds. Progressive Fish Culturist, vol. 14, No. 2, pp. 83–88.

LAWRENCE, J. M.
1962. Aquatic Herbicide Data. U. S. Department of Agriculture, Research Service, Handbook No. 231, pp. 1–33.

MACKENTHUN, K. M.
1958. The Chemical Control of Aquatic Nuisances. Wisconsin Committee on Water Pollution, Madison, Wisconsin, pp. 1–64.

MACKENTHUN, K. M.
1960. What You Should Know About Algae Control. Public Works Journal, vol. 91, No. 9, pp. 114–116, 158.

MALONEY, T. E.
1958. Control of Algae with Chlorophenyl Dimethyl Urea. Journal of the American Water Works Association, vol. 50, No. 3, pp. 417–422.

MARQUIS, J. K.
1932. Copper Sulfate as an Algicide. Journal of the American Water Works Association, vol. 24, No. 5, pp. 728–732.

MARSH, M. C. and R. K. ROBINSON
1910. The Treatment of Fish-Cultural Waters for the Removal of Algae. Bulletin of the U. S. Bureau of Fisheries 28 (Part 2), pp. 871–890 (1908).

MONIE, W. D.
1941. Algae Control. Journal of the American Water Works Association, vol. 33, No. 4, pp. 705–720.

MONIE, W. D.
1947. Pre-Determining Effective Dosage of Copper Sulphate in Algae Control. Water and Sewage Works, vol. 94 (Reference and Data Section), pp. 118–120.

MONIE, W. D.
1951. Algae Control. Taste and Odor Control Journal, vol. 17, No. 2, pp. 1–7.

MONIE, W. D.
1955. Determining Copper Sulphate Dosage. Water and Sewage Works (References and Data Section), vol. 102, No. 6, pp. R–119–121.

MONIE, W. D.
1956. Algae Control with Copper Sulfate. Water and Sewage Works, vol. 103, No. 9, pp. 392–397.

MOORE, G. T. and K. F. KELLERMAN
1904. A Method of Destroying or Preventing the Growth of Algae and Certain Pathogenic Bacteria in Water Supplies. U. S. Department of Agriculture, Bureau of Plant Industry, Bulletin 64.

MOORE, G. T. and K. F. KELLERMAN
1905. Copper as an Algicide and Disinfectant in Water Supplies. U. S. Department of Agriculture, Bureau of Plant Industry, Bulletin 76, pp. 1–55.

O'DONNELL, D. J.
1943. Control of *Hydrodictyon reticulatum* in Small Ponds. Transactions of the American Fisheries Society, vol. 73, pp. 59–62.

ROHLICH, G. A. and W. B. SARLES
1949. Chemical Composition of Algae and Its Relationship to Taste and Odor. Taste and Odor Control Journal, vol. 15, No. 6, pp. 1–12.

ROSE, E. T.
1954. Blue-green Algae Control at Storm Lake. Proceedings Iowa Academy of Sciences, vol. 61, pp. 604–614.

SNOW, J. R.
1963. Simazine as an Algicide for Bass Ponds. Progressive Fish Culturist, vol. 25, No. 1, pp. 34–36.

TARLTON, E. A.
1949. Algae Control. Water and Sewage Works, vol. 96, No. 6, pp. 221–224.

FLOWERING AQUATIC PLANT CONTROL

BARTSCH, A. F.
1954. Practical Methods for Control of Algae and Water Weeds. Public Health Reports, vol. 69, No. 8, pp. 749–757.

BAUMAN, A. C.
1947. 2,4-D and Some Emergent Aquatics. Progressive Fish Culturist, vol. 9, No. 2, pp. 71–77.

BAUMAN, A. C.
1947. The Effects of Ammonium Sulfamate on Emergent Aquatic Vegetation. Transactions of the Twelfth North American Wildlife Conference, pp. 346–355.

BAUMGARTNER, L. L.
1955. A Case History of a Misapplication of CMU for Aquatic Weed Control. Proceedings of the Ninth Northeastern Weed Control Conference, pp. 559–562.

BENSON, N. G. and J. T. CONNER
1956. Use of CMU to Control *Najas*. Progressive Fish Culturist, vol. 18, No. 2, pp. 78–80.

BRUNS, V. F. and W. H. FARMER
1950. Aromatic Solvents for Waterweeds. The Reclamation Era, Part I, vol. 36, No. 4, pp. 79–82; Part II, vol. 36, No. 5, pp. 96–97.

CLARK, W. F.
1954. Controlling Weeds and Algae in Farm Ponds. Cornell University,

Ithaca, New York, Bulletin 910, pp. 1–15.

DERBY, R. L. and D. W. GRAHAM
1953. Control of Aquatic Growths in Reservoirs by Copper Sulphate and Secondary Effects of Such Treatment. Proceedings of the American Society of Civil Engineers, vol. 79, Separate No. 203, pp. 1–15.

DERBY, R. L. and F. W. TOWNSEND
1953. Reservoir Treatment by Improved Methods. Water and Sewage Works, vol. 100, No. 6, pp. 211–216.

DERBY, R. L.
1954. Methods of Controlling Aquatic Growths in Reservoirs. Journal of the American Water Works Association, vol. 46, No. 11, pp. 1150–1158.

DOMOGALLA, B. P.
1926. Treatment of Algae and Weeds in Lakes at Madison, Wisconsin. Engineering News Record, vol. 97, No. 24, pp. 950–954.

DUTTON, P.
1955. Hyacinth Control Report. Louisiana Conservationist, vol. 7, No. 8, pp. 8–11.

EGGLER, W. A.
1953. The Use of 2,4-D in the Control of Water Hyacinth *(Eichhornia crassipes)* & Alligator Weed *(Alternanthera philoxeroides)* in the Mississippi Delta with Certain Ecological Implications. Ecology, vol. 34, No. 4, pp. 409–414.

EICHER, G.
1947. Aniline Dye in Aquatic Weed Control. Journal of Wildlife Management, vol. 11, pp. 193–197. (Reprinted in the Progressive Fish Culturist, vol. 10, No. 1, pp. 39–42, 1948).

EIPPER, A. W. and H. B. BRUMSTED
1959. How to Control Weeds and Algae in Farm Ponds. Cornell Extension Bulletin 1014, New York State College of Agriculture, pp. 1–32.

FLENTJE, M. E.
1952. Control of Algae and Weeds in Reservoirs. Journal of the American Water Works Association, vol. 44, No. 8, pp. 727–731.

FREELAND, R. O.
1950. Effects of 2,4-D and Other Growth Substances on Photosynthesis and Respiration in *Anacharis*. Botanical Gazette, vol. 111, pp. 319–324.

GERKING, S. D.
1948. Destruction of Submerged Aquatic Plants by 2,4-D. Journal of Wildlife Management, vol. 12, No. 3, pp. 221–227.

GOUDEY, R. F.
1946. Chemical Weed Control. Journal of the American Water Works Association, vol. 38, No. 2, pp. 186-202.

HARRIS, B. B. and J. K. G. SILVEY
1940. Underwater Cutting Tool for Aquatic Plants. Journal of the American Water Works Association, vol. 32, No. 11, p. 1883.

HILDEBRAND, E. M.
1946. Herbicidal Action of 2,4-Dichlorophenoxyacetic Acid on the Water Hyacinth, *Eichhornia crassipes*. Science, vol. 103, pp. 477–479.

LAWRENCE, J. M.
1958. Methods for Controlling Aquatic Weeds in Fish Ponds with Emphasis on Use of Chemicals. Agricultural Experiment Station of the Alabama Polytechnic Institute, Auburn, Alabama, Progress Report Series No. 69, pp. 1–4.

LEPORE, A.
1955. Let's Clean Up Plant Choked Ponds. The American City, vol. 70, No. 6, pp. 125, 215.

MACKENTHUN, K. M.
1950. Aquatic Weed Control with Sodium Arsenite. Sewage and Industrial Wastes, vol. 22, No. 8, pp. 1062–1067.

MACKENTHUN, K. M.
1958. The Chemical Control of Aquatic Nuisances. Wisconsin Committee on Water Pollution, Madison, Wisconsin, pp. 1–64.

MARTIN, A. C., R. C. ERICKSON and J. H. STEENIS
1957. Improving Duck Marshes by Weed Control. U. S. Department of the Interior, Fish and Wildlife Service, Circular 19—Revised, pp. 1–60.

OBORN, E. T.
1954. Control of Aquatic Weeds that Impede Flow of Western Irrigation

Waters. Weeds, vol. 3, No. 3, pp. 213–240.

OBORN, E. T., W. T. MORAN, K. T. GREENE and T. R. BARTLEY
1954. Weed Control Investigations of Some Important Aquatic Plants which Impede Flow of Western Irrigation Waters. Sect. of Weed Investigations, FCRS, ARS, USDA, and Bureau of Reclamation, Engineering Laboratories, USDI, Denver, Colorado, Joint Laboratory Report No. SI–2, pp. 1–84.

SEALE, C. C., J. W. RANDOLPH and J. C. STEPHENS
1952. Aromatic Solvents for the Control of Submersed Water Weed Naiad, *Najas guadalupensis* (Spreng.) Morong., in South Florida. Weeds, vol. 1, No. 4, pp. 366–371.

SPEIRS, J. M.
1948. Summary of Literature on Aquatic Weed Control. Canadian Fish Culturist, vol. 3, No. 4, pp. 20–32.

STEENIS, J. H.
1950. Studies on the Use of Herbicides for Improving Waterfowl Habitat in Western Kentucky and Tennessee. Journal of Wildlife Management, vol. 14, No. 2, pp. 162–169.

STEPHENS, J. C., A. L. CRAIG and C. C. SEALE
1954. Blended Solvents for Control of the Submersed Water Weed Naiad *(Najas guadalupensis)* in South Florida. Weeds, vol. 3, No. 2, pp. 160–170.

SURBER, E. W.
1931. Sodium Arsenite for Controlling Vegetation in Fish Ponds. Transactions of the American Fisheries Society, vol. 61, pp. 143–148.

SURBER, E. W.
1943. Weed Control in Hard-Water Ponds with Copper Sulphate and Sodium Arsenite. Transactions of the 8th North American Wildlife Conference, pp. 132–141.

SURBER, E. W.
1947. Aquatic Plant Control with 2,4-D. U. S. Department of the Interior, Fish and Wildlife Service, Fishery Leaflet 217, pp. 1–5.

SURBER, E. W.
1949. Control of Aquatic Plants in Ponds and Lakes. U. S. Department of the Interior, Fish and Wildlife Service, Fishery Leaflet 344, pp. 1–20.

SURBER, E. W. and M. H. EVERHART
1950. Biological Effects of Nigrosine Used for Control of Weeds in Hatchery Ponds. Progressive Fish Culturist, vol. 12, No. 3, pp. 135–140.

SURBER, E. W.
1961. Improving Sport Fishing by Control of Aquatic Weeds. U. S. Department of the Interior, Fish and Wildlife Service, Circular 128, pp. 1–37.

THREINEN, C. W. and W. T. HELM
1954. Experiments and Observations Designed to Show Carp Destruction of Aquatic Vegetation. Journal of Wildlife Management, vol. 18, No. 2, pp. 247–250.

TIMMONS, F. L.
1960. Weed Control in Western Irrigation and Drainage Systems (Losses Caused by Weeds and Costs and Benefits of Weed Control). Joint Report, U. S. Department of Agriculture and U. S. Department of Interior, ARS, 34–14, pp. 1–22.

TRYON, C. A., JR.
1954. The Effect of Carp Enclosures on Growth of Submerged Aquatic Vegetation in Pymatuning Lake, Pennsylvania. Journal of Wildlife Management, vol. 18, No. 2, pp. 251–254.

VAN OVERBEEK, J., W. J. HUGHES and R. BLONDEAU
1959. Acrolein for the Control of Water Weeds and Disease-Carrying Water Snails. Science, vol. 129, pp. 335–336.

WALKER, C. R.
1964. Toxicological Effects of Herbicides on the Fish Environment. Water and Sewage Works, vol. 3, No. 1, pp. 173–175.

INSECT CONTROL

ARNASON, A. P., A. W. A. BROWN, F. J. H. FREDEEN, et al.
1949. Experiments in the Control of *Simulium arcticum* Malloch by Means of DDT in the Saskatchewan River.

Scientific Agriculture, Agricultural Institute of Canada, Ottawa, vol. 29, No. 11, pp. 527–537.

ARNOLD, G. E.
1936. Plankton and Insect Larvae Control in California Waters. Journal of the American Water Works Association, vol. 28, No. 10, pp. 1469–1479.

FELLTON, H. L.
1940. Control of Aquatic Midges with Notes on the Biology of Certain Species. Journal of Economic Entomology, vol. 33, No. 2, pp. 252–264.

GJULLIN, C. M., O. B. COPE, B. F. QUISENBERRY and F. R. DU CHAMOIS
1949. The Effect of Some Insecticides on Black Fly Larvae in Alaskan Streams. Journal of Economic Entomology, vol. 42, No. 1, pp. 100–105.

HILLSENHOFF, W. L.
1959. The Evaluation of Insecticides for the Control of *Tendipes plumosus* (Linnaeus). Journal of Economic Entomology, vol. 52, No. 2, pp. 331–332.

HUNT, E. G. and A. I. BISCHOFF
1960. Inimical Effects on Wildlife of Periodic DDD Applications to Clear Lake. California Fish and Game, vol. 46, No. 1, pp. 91–106.

JAMNBACK, H. and W. WALL
1957. Control of Salt Marsh Tabanus Larvae with Granulated Insecticides. Journal of Economic Entomology, vol. 50, No. 8, pp. 379–382.

LIEUX, D. B. and J. A. MULRENNAN
1956. Investigations of the Biology and Control of Midges in Florida (Diptera: Tendipedidae). A Progress Report. Mosquito News, vol. 16, No. 3, pp. 201–204.

LINDQUIST, A. W. and A. R. ROTH
1950. Effect of Dichlorodiphenyl dichloroethane on Larvae of the Clear Lake Gnat in California. Journal of Economic Entomology, vol. 43, No. 3, pp. 328–332.

LINDQUIST, A. W., A. R. ROTH and J. R. WALKER
1951. Control of the Clear Lake Gnat in California. Journal of Economic Entomology, vol. 44, No. 4, pp. 572–577.

PATTERSON, R. S. and D. L. VON WINDEGUTH
1964. The Effects of Baytex on Some Aquatic Organisms. Mosquito News, vol. 24, No. 1, pp. 46–49.

PATTERSON, R. S.
1964. Recent Investigations on the Use of BHC and EPN to Control Chironomid Midges in Central Florida. Mosquito News, vol. 24, No. 3, pp. 294–299.

PROVOST, M. W.
1958. Chironomids and Lake Nutrients in Florida. Sewage and Industrial Wastes, vol. 30, No. 11, pp. 1417–1419.

RAI, L. and L. L. LEWALLEN
1960. Effect of Varying Depths of Water with Identical Surface Area on Mosquito Larval Mortality Using Concentrates. Mosquito News, vol. 20, No. 3, pp. 271–274.

SWIMMER'S ITCH CONTROL

ANON.
1939. Report on the Chemical Treatment of Lakes and Streams with Special Reference to the Origin and Control of Swimmers' Itch. Committee on Water Pollution, State of Wisconsin, Madison, pp. 1–20.

BRACKETT, S.
1939. Methods for Controlling Schistosome Dermatitis. Journal of the American Medical Association, vol. 113, pp. 117–121.

BRACKETT, S.
1941. Schistosome Dermatitis and Its Distribution. In: Symposium on Hydrobiology, Madison, Wisconsin, pp. 360–378.

CORT, W. W.
1928. Schistosome Dermatitis in the United States (Michigan). Journal of the American Medical Association, vol. 90, pp. 1027–1029.

CORT, W. W.
1950. Studies on Schistosome Dermatitis XI. Status of Knowledge After More Than Twenty Years. American Journal of Hygiene, vol. 52, No. 3, pp. 251–307.

Ferguson, F. F., C. S. Richards and J. R. Palmer

1961. Control of *Australorbis glabratus* by Acrolein in Puerto Rico. Public Health Reports, vol. 76, No. 3, pp. 461–468.

Howard, T. E., H. N. Halvarson and C. C. Walden

1964. Toxicity of Copper Compounds to the Snail Vector Hosts of the Agent of Schistosome Dermatitis in Waters of Differing Hardness. American Journal of Hygiene, vol. 79, No. 3, pp. 33–44.

Mackenthun, K. M.

1958. The Chemical Control of Aquatic Nuisances. Wisconsin Committee on Water Pollution, Madison, Wisconsin, pp. 1–64.

Nolan, M. O. and H. W. Bond

1955. Results of Laboratory Screening Tests of Chemical Compounds for Molluscicidal Activity. American Journal of Tropical Medicine & Hygiene, vol. 4, No. 1, pp. 152–155.

van Oberbeek, J., W. J. Hughes and R. Blondeau

1959. Acrolein for the Control of Water Weeds and Disease-Carrying Water Snails. Science, vol. 129, pp. 335–336.

PESTICIDES AND THEIR EFFECT UPON AQUATIC LIFE

Adams, L., M. G. Hanavan, et al.

1949. The Effects on Fish, Birds, and Mammals of DDT Used in the Control of Forest Insects in Idaho and Wyoming. Journal of Wildlife Management, vol. 13, No. 3, pp. 245–254.

Ball, R. C.

1948. A Summary of Experiments in Michigan Lakes on the Elimination of Fish Populations with Rotenone. Transactions of the American Fisheries Society, vol. 75, pp. 139–146.

Bond, C. E.

1960. Toxicity of Various Herbicidal Materials to Fishes. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. W60–3, pp. 96–101.

Cohen, J. M., L. J. Kamphake, A. E. Lemke, C. Henderson and R. L. Woodward

1960. Effect of Fish Poisons on Water Supplies. Part I. Removal of Toxic Materials. Journal of the American Water Works Association, vol. 52, No. 12, pp. 1551–1566.

Cohen, J. M., G. A. Rourke and R. L. Woodward

1961. Effect of Fish Poisons on Water Supplies. Part 2. Odor Problems. Journal of the American Water Works Association, vol. 53, No. 1, pp. 49–62.

Cohen, J. M., Q. H. Pickering, R. L. Woodward and W. Van Heuvelen

1961. Effect of Fish Poisons on Water Supplies. Part 3. Field Study at Dickinson. Journal of the American Water Works Association, vol. 53, No. 2, pp. 233–246.

Cushing, C. E., Jr. and J. R. Olive

1956. Effects of Toxaphene and Rotenone Upon the Macroscopic Bottom Fauna of Two Northern Colorado Reservoirs. Transactions of the American Fisheries Society, vol. 86, pp. 294–301.

Domogalla, B. P.

1935. Eleven Years of Chemical Treatment of Madison Lakes: Its Effect on Fish and Fish Foods. Transactions of the American Fisheries Society, vol. 65, pp. 115–121.

Fukano, K. G. and F. F. Hooper

1958. Toxaphene (Chlorinated Camphene) as a Selective Fish Poison. Progressive Fish Culturist, vol. 20, No. 4, pp. 189–190.

Hanson, W. R.

1952. Effects of Some Herbicides and Insecticides on Biota of North Dakota Marshes. Journal of Wildlife Management, vol. 16, No. 3, pp. 299–308.

Hasler, A. D.

1949. Antibiotic Aspects of Copper Treatment of Lakes. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, vol. 39, pp. 97–103.

Hemphill, J. E.

1954. Toxaphene as a Fish Toxin. Progressive Fish Culturist, vol. 16, No. 1, pp. 41–42.

Hunt, E. G. and A. I. Bischoff

1960. Inimical Effects on Wildlife of Periodic DDD Applications to Clear Lake. California Fish and Game, vol. 46, No. 1, pp. 91–106.

Krumholz, L. A.

1950. Some Practical Considerations in the Use of Rotenone in Fisheries Research. Journal of Wildlife Management, vol. 14, No. 4, pp. 413–424.

Mackenthun, K. M. and H. L. Cooley

1952. The Biological Effect of Copper Sulphate Treatment on Lake Ecology. Wisconsin Academy of Sciences, Arts, and Letters, vol. 41, pp. 177–187.

Matheson, D. H.

1952. The Effects of Algae in Water Supplies. International Water Supply Association, Second Congress, pp. 1–82.

Moyle, J. B.

1949. The Use of Copper Sulphate for Algal Control and Its Biological Implications. In: Limnological Aspects of Water Supply and Waste Disposal. American Association for the Advancement of Science, Washington, D. C., pp. 79–87.

Nichols, M. S., T. Henkel and D. McNall

1946. Copper in Lake Muds from Lakes of the Madison Area. Transactions of the Wisconsin Academy of Sciences, Arts and Letters, vol. 38, pp. 333–350.

Nicholson, H. P., H. J. Webb, G. J. Lauer, R. E. O'Brien, A. R. Grzenda and D. W. Shanklin

1962. Insecticide Contamination in a Farm Pond. Part I. Origin and Duration. Part II. Biological Effects. A. R. Grzenda, G. J. Lauer, and H. P. Nicholson. Transactions of the American Fisheries Society, vol. 91, No. 2, pp. 213–222.

Rudd, R. L. and R. E. Genelly

1956. Pesticides: Their Use and Toxicity in Relation to Wildlife. State of California, Department of Fish and Game, Game Management Branch, Game Bulletin No. 7, pp. 1–209.

Smith, M. W.

1935. The Use of Copper Sulphate for Eradicating the Predatory Fish Population of a Lake. Transactions of the American Fisheries Society, vol. 65, pp. 101–113.

Smith, M. W.

1939. Copper Sulfate and Rotenone as Fish Poisons. Transactions of the American Fisheries Society, vol. 69, pp. 141–157.

Surber, E. W.

1948. Chemical Control Agents and Their Effects on Fish. Progressive Fish Culturist, vol. 10, No. 3, pp. 125–131.

Surber, E. W. and O. L. Meehean

1931. Lethal Concentrations of Arsenic for Certain Aquatic Organisms. Transactions of the American Fisheries Society, vol. 61, pp. 143–148.

Surber, E. W. and M. H. Everhart

1950. Biological Effects of Nigrosine Used for Control of Weeds in Hatchery Ponds. Progressive Fish Culturist, vol. 12, No. 3, pp. 135–140.

Surber, E. W. and A. F. Bartsch

1952. Are Chemicals Killing Our Fish and Wildlife? Outdoor American (Sept.-Oct.), pp. 1–8.

Titcomb, J. W.

1914. The Use of Copper Sulphate for the Destruction of Obnoxious Fishes in Ponds and Lakes. Transactions of the American Fisheries Society, vol. 40, pp. 20–26.

Ullmann, W. W., R. W. Schaefer and W. W. Sanderson

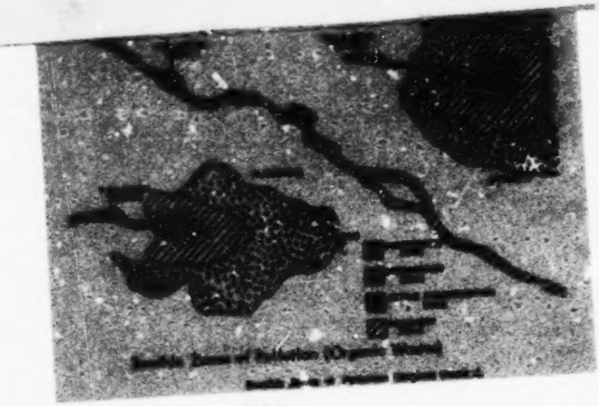
1961. Arsenic Accumulation by Fish in Lakes Treated with Sodium Arsenite. Journal of the Water Pollution Control Federation, vol. 33, No. 4, pp. 416–418.

Wiebe, A. H.

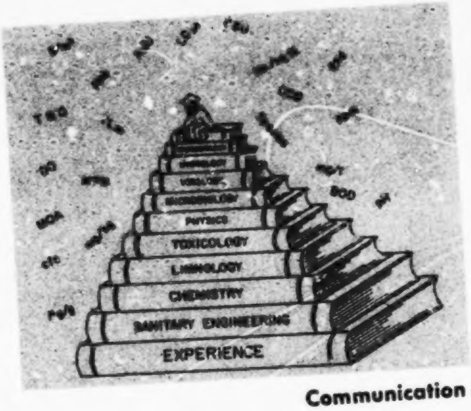
1930. Notes on the Exposure of Young Fish to Varying Concentrations of Arsenic. Transactions of the American Fisheries Society, vol. 60, pp. 270–278.

Wiebe, A. H., E. G. Gross and D. H. Slaughter

1931. The Arsenic Content of Large-Mouth Black Bass (*Micropterus salmoides* Lacepede) Fingerlings. Transactions of the American Fisheries Society, vol. 61, pp. 150–163.



Graphic display of data.


TOXICOLOGY
PHYSICS
LIMNOLOGY
CHEMISTRY
SANITARY ENGINEERING
EXPERIENCE
BOD
DO

Data analysis.

Communication of information.

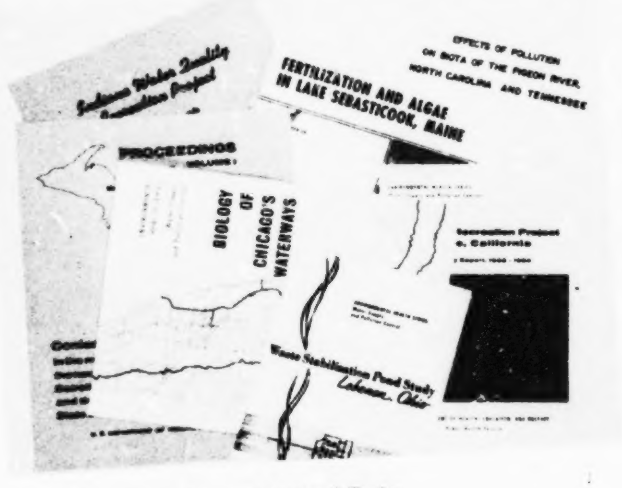

EFFECTS OF POLLUTION ON BIOTA OF THE PIGEON RIVER, NORTH CAROLINA AND TENNESSEE
FERTILIZATION AND ALGAE IN LAKE SEBASTICOOK, MAINE
PROCEEDINGS
BIOLOGY OF CHICAGO'S WATERWAYS
Waste Stabilization Pond Study
Lebanon, Ohio

Plate IV—Reporting Biological Data

Preceding page blank

PART IV

REPORTING ASPECTS FOR BIOLOGICAL DATA

To DEFINE the biological findings of pollution studies, the biologist must convey his message to those in associated disciplines such as engineers and administrators, and to the general public. Delivery of this message through oral or written reports is not accomplished when the report is cluttered with bad phrases, unnecessary technical terms, meaningless words, and non-pertinent graphical material. It is apparent, then, that one of the biologist's principal responsibilities is to prepare reports containing information that is descriptive, concise, easy to read, and understandable. Such reports accomplish their objectives by communicating the results of the study to all concerned.

Although this unit contains fewer references than any of the preceding, the importance of its contents cannot be understated.

REPORTING BIOLOGICAL DATA

BARTSCH, A. F. and W. M. INGRAM
1959. Stream Life and the Pollution Environment. Public Works, vol. 90, No. 7, pp. 104–110.

BEAK, T. W., C. DE COURVAL and N. E. COOKE
1959. Pollution Monitoring and Prevention by Use of Bivariate Control Charts. Sewage and Industrial Wastes, vol. 31, No. 12, pp. 1383–1394.

BEAK, T. W.
1964. Biological Measurements of Water Pollution. Chemical Engineering Progress, vol. 60, No. 1, pp. 39–43.

BECK, W. M., JR.
1954. Studies in Stream Pollution Biology. I. A Simplified Ecological Classification of Organisms. Quarterly Journal of the Florida Academy of Science, vol. 17, No. 4, pp. 211–227.

BECK, W. M., JR
1955. Suggested Method for Reporting Biotic Data. Sewage and Industrial Wastes, vol. 27, No. 10, pp. 1193–1197.

BURLINGTON, R. F.
1962. Quantitative Biological Assessment of Pollution. Journal of the Water Pollution Control Federation, vol. 34, No. 2, pp. 179–183.

CONFERENCE OF BIOLOGICAL EDITORS, COMMITTEE ON FORM AND STYLE
1964. Style Manual for Biological Journals. Second Edition. American Institute of Biological Sciences, Washington, D. C., 117 pp.

EMBERGER, M. R. and M. R. HALL
1955. Scientific Writing. Harcourt, Brace and Company, New York, 468 pp.

FJERDINGSTAD, E.
1964. Some Remarks on a New Saprobic System. In: Biological Problems in Water Pollution—Transactions of the 1962 Seminar, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service Publication No. 999–WP–25, pp. 232–235.

HYNES, H. B. N.
1964. The Interpretation of Biological Data with Reference to Water Qual-

Preceding page blank

ity. In: Symposium on Environmental Measurements, Valid Data and Logical Interpretation, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-AP-15, pp. 289–298.

INGRAM, W. M. and A. F. BARTSCH
1960. Graphic Expression of Biological Data in Water Pollution Reports. Journal of the Water Pollution Control Federation, vol. 32, No. 3, pp. 297–310.

KRAMER, H. P. and M. M. MYERS
1963. So You're Going to Give a Paper. Journal of the Water Pollution Control Federation, vol. 35, No. 1, pp. 43–56.

LAMBUTH, D.
1964. The Golden Book on Writing. Fourth Printing. The Viking Press, New York, 81 pp.

MACKENTHUN, K. M., W. M. INGRAM and R. PORGES
1964. Sampling and Data Evaluation. In: Limnological Aspects of Recreational Lakes, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service Publication No. 1167, pp. 119–139.

MACKENTHUN, K. M. and W. M. INGRAM
1965. Pollution and the Life in Water. Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio. U. S. Public Health Service, Publication No. 999-WP-20, pp. 1–16.

MACKENTHUN, K. M.
1966. Biological Evaluation of Polluted Streams. Journal of the Water Pollution Control Federation, vol. 38, No. 2, pp. 241–247.

PATRICK, R.
1949. A Proposed Biological Measure of Stream Conditions, Based on a Survey of the Conestoga Basin, Lancaster County, Pennsylvania. Proceedings of the Academy of Natural Sciences, vol. 101, pp. 277–341.

WURTZ, C. B.
1955. Stream Biota and Stream Pollution. Sewage and Industrial Wastes, vol. 27, No. 11, pp. 1270–1278.

ACKNOWLEDGMENTS

SINCERE APPRECIATION is extended to those who provided assistance and encouragement in the preparation of this publication, and to those who supplied photographs which are incorporated into the following plates: Plate I, No. 2, and Plate II, Nos. 1 and 3, Mr. Lowell E. Keup, Cincinnati, Ohio; and Plate III, No. 3, Mr. F. A. Underwood, Superintendent of Filtration, Milwaukee, Wisconsin.

Mrs. Kay Lynne Stewart contributed significantly to the preparation of initial manuscript materials, and Mrs. Martha Jean Wilkey meticulously typed manuscripts. Their diligent efforts are gratefully acknowledged.

☆ U.S. GOVERNMENT PRINTING OFFICE: [illegible]